Stormwater Division

MEMORANDUM

DATE: March 12, 2010

TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services

FROM: Jo Anna Ripley, Stormwater

PO: 270712

RE: Files Approved for Scanning

General File ID or BMP ID: PC238

PIN: 3830100034A

Subdivision, Tract, Business or Owner Name (if known): Windsormeade Marketplace

Property Description: Shopping Center

Site Address: 3975 Windsormeade Way

(For internal use only) **Box** 18 **Drawer:** N/A

Agreements: (in file as of scan date) Y **Book or Doc#:** 050003825 **Page:**

030023373

Comments

Date Record Created:

Created By:

WS_BMPNO: PC238

Print Record

PRINTED ON
Thursday, March 11, 2010
4:16:46 PM

WATERSHED	PC
BMP ID NO	238
PLAN NO	SP-05-04
TAX PARCEL	38-3
PIN NO	1-34A
CONSTRUCTION DATE	10/1/2008
PROJECT NAME	WindsorMeade Villas Road
FACILITY LOCATION	Behind Guard Shack
CITY-STATE	Williamsburg, Va
CURRENT OWNER	Virginia United Methodist Home
OWNER ADDRESS	
OWNER ADDRESS 2	4704 Shortley Way
CITY-STATE-ZIP CODE	Williamsburg, Va 23188
OWNER PHONE	757-565-6200
MAINT AGREEMENT	Yes
EMERG ACTION PLAN	Yes

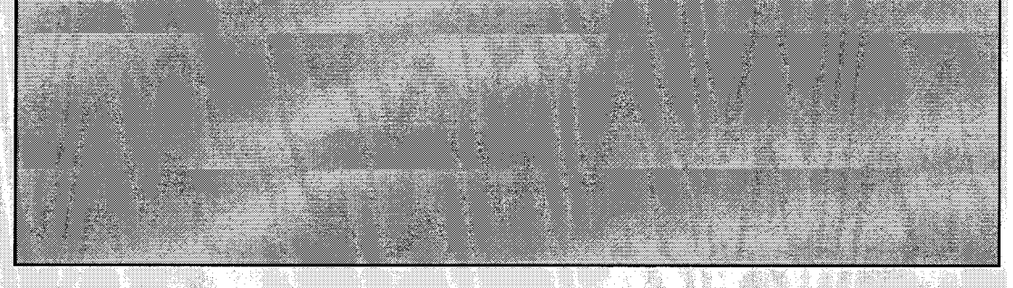
Get Last BMP No | Return to Menu

MAINTENANCE PLAN	Yes	CTRL STRUC DESC	Trash Rack
SITE AREA acre	2.82	CTRL STRUC SIZE inches	
LAND USE	Mixed Use	OTLT BARRL DESC	RCP
old BMP TYP	Wet Pond	OTLT BARRL SIZE inch	12
JCC BMP CODE	A3 Wet ED Pond		
POINT VALUE		EMERG SPILLWAY	Yes
		DESIGN HW ELEV	57.76
		PERM POOL ELEV	55.38
SVC DRAIN AREA acres	2.1	2-YR OUTFLOW cfs	56.02
		10-YR OUTFLOW cfs	56.77
		REC DRAWING	No
SERVICE AREA DESCRI	Service Hall & WMW Roads		
IMPERV AREA acres	0.44	CONSTR CERTIF	Yes
RECV STREAM	Powhatan Creek		
EXT DET-WQ-CTRL	No	LAST INSP DATE	1/22/2010
WTR QUAL VOL acre-ft		INTERNAL RATING	
CHAN PROT CTRL	No	MISC/COMMENTS	
CHAN PROT VOL acre-ft			
SW/FLOOD CONTROL	No		
GEOTECH REPORT	No		

Inspected by: Greg Johnson

Wet Pond along south side of road before wall at turn into Windsor Hall

Additional Comments:



COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS

INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

THIS DECLARATION, made this 11th day of February, 2005, between VIRGINIA UNITED METHODIST HOMES, INC., and all successors in interest, ("COVENANTOR(S),") owner(s) of the following property:

Street Address: 144 JESTERS LANE
Legal Description: 105.931 AC CC CASEY LIMITED COMPANY
Project Name: WINDSORMEADE VILLA ENTRANCE AND SEWER CONSTRUCTION PLAN
Document No. 030023373, Deed Book —, Page No. —;
Instrument No. —, and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

We, the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, monitoring, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

Instrument # 050003825
Recorded on Feb. 23, 2005

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the SYSTEM.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the SYSTEM. The COVENANTOR(S)' shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the SYSTEM.

9. This COVENANT shall be recorded in the County Land Records.

IN WITNESS WHEREOF, the COVENANTOR(S) have executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)

Wm. Jerry Fink

Print Name/Title Wm. Jerry Fink, President

ATTEST:

James D. Brockley

COVENANTOR(S)

_____

Print Name/Title _____

ATTEST:

_____

COMMONWEALTH OF VIRGINIA

CITY/COUNTY OF Henrico

I hereby certify that on this 11th day of February, 2005, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared Wm. Joseph Fink and did acknowledge the aforegoing instrument to be their Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 11th day of February, 2005.

Judy M. Walker
Notary Public

My Commission expires: 9-30-08

Approved as to form:

County Attorney

This Declaration of Covenants prepared by:

JAMES D. FRANKLIN
(Print Name)

ENGINEERING & CONSTRUCTION MGR.
(Title)

453 McLAWS CIRCLE, SUITE 2
(Address)

WILLIAMSBURG, VA 23185
(City) (State) (Zip)

757-565-9670
(Phone Number)

drainage1.pre

WindsorMeade Villa Entrance and Sewer Plan

SWM / BMP BOUYANCE CALCULATIONS
March 17, 2004

Note: THESE CALCULATION PROVIDED TO INSURE THE PRINCIPAL SPILLWAY / RISER DOES NOT HAS THE TENDENCY TO FLOAT.

ELEVATIOIN OF RISER CREST = 56.0 ✓

ELEVATION OF INVERT OF RISER = (AFTER GROUTING) 53.5 ✓

INSIDE DIAMETER OF RISER = 5 feet ✓

OUTSIDE DIAMETER OF RISER = 6 feet ✓

WEIGHT OF WATER DISPLACED BY AIR

Weight of water displaced by air: Weight of water per cu. Ft. * 3.14 * (Diameter of riser / 2)^2 * (El. Of Riser Creast - El. Of riser invert)

Weight of water displaced by air: 3,062 lbs. ✓

WEIGHT OF PRINCIPAL SPILLWAY / RISER

Weight of concrete of riser = (Weight of concrete per cu. Ft. * 3.14 * (Outside diameter of riser / 2)^2 * (El. Of Riser Creast - El. Of riser invert)) - (Weight of concrete per cu. Ft. * 3.14 * (Inside diameter of riser / 2)^2 * (El. Of Riser Creast - El. Of riser invert))

Weight of Concrete Riser = 3,238 lbs.

Weight of EW-11 = 4,255 lbs. (Based on 28cuft of concrete)

Weight of Extend Base Only = - lbs.

Total Weight of Riser = 7,493 lbs. ✓

Total Weight of Riser > Weight of Water Displaced, I.e. Will not float !

PROJECT: WINDSOR MEADE VILLA
ENTRANCE AND SEWER
JOB# 88185

STATION: _____
SHEET 1 OF 1

CULVERT DESIGN FORM

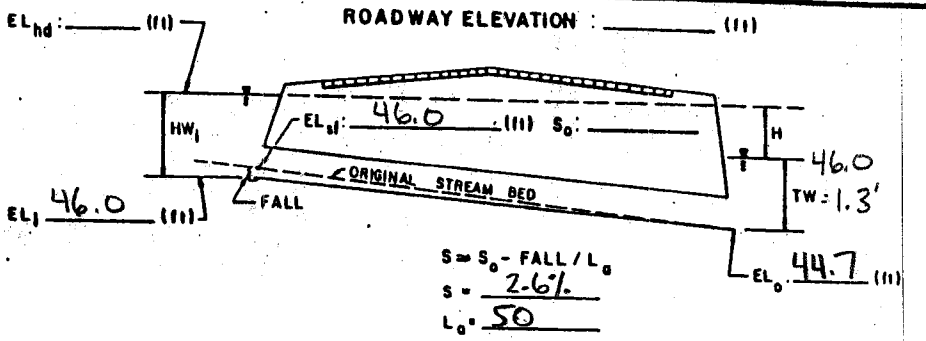
DESIGNER / DATE: JAG / 3/17/04
REVIEWER / DATE: _____ / _____

HYDROLOGICAL DATA

SEE ADD'L SHTS.
- ☐ METHOD: SCS
- ☐ DRAINAGE AREA: 30Ac ☐ STREAM SLOPE: 2-5%
- ☐ CHANNEL SHAPE: Natural ~ Trapezodial
- ☐ ROUTING: _____ ☐ OTHER: _____

DESIGN FLOWS/TAILWATER

R.I. (YEARS)	FLOW (cfs)	TW (ft)
10yr	49 cfs	46.0'



CULVERT DESCRIPTION: MATERIAL - SHAPE - SIZE - ENTRANCE	TOTAL FLOW Q (cfs)	FLOW PER BARREL Q/N (1)	HEADWATER CALCULATIONS: INLET CONTROL HW_i/D (2)	INLET CONTROL HW_i	INLET CONTROL FALL (3)	INLET CONTROL EL_hi (4)	OUTLET CONTROL TW (5)	OUTLET CONTROL d_c	OUTLET CONTROL (d_c+D)/2	OUTLET CONTROL h_o (6)	OUTLET CONTROL h_o	OUTLET CONTROL H (7)	OUTLET CONTROL EL_ho (8)	CONTROL HEADWATER ELEVATION	OUTLET - VELOCITY	COMMENTS
RCP - CIR - 60" - HEADWALL	49	49	.55	2.75	0	48.8	1.3	2	3.5	3.5	0.2	~0	48.2	48.8	V.?	OK
						L	INLET CONTROL									
														10-YR		48.8 (HW CHART)
														10-YR		49.37 (ROUTED)

TECHNICAL FOOTNOTES:

(1) USE Q/NB FOR BOX CULVERTS

(2) HW_i/D = HW /D OR HW_i/D FROM DESIGN CHARTS

(3) FALL = $HW_i - (EL_{hd} - EL_{sf})$; FALL IS ZERO FOR CULVERTS ON GRADE

(4) $EL_{hi} = HW_i + EL_i$ (INVERT OF INLET CONTROL SECTION)

(5) TW BASED ON DOWN STREAM CONTROL OR FLOW DEPTH IN CHANNEL.

(6) h_o = TW or $(d_c + D/2)$ (WHICHEVER IS GREATER)

(7) $H = \left[1 + k_o + (29n^2 L)/R^{1.33}\right] V^2/2g$

(8) $EL_{ho} = EL_o + H + h_o$

SUBSCRIPT DEFINITIONS:

- e. APPROXIMATE
- f CULVERT FACE
- hd. DESIGN HEADWATER
- hi. HEADWATER IN INLET CONTROL
- ho HEADWATER IN OUTLET CONTROL
- i. INLET CONTROL SECTION
- o. OUTLET
- sf STREAMBED AT CULVERT FACE
- tw. TAILWATER

COMMENTS / DISCUSSION:

SOT CHECK (PONDPACK) 10-YR
INLET 48.69
OUTLET 49.06
OUTLET CONTROL 49.06

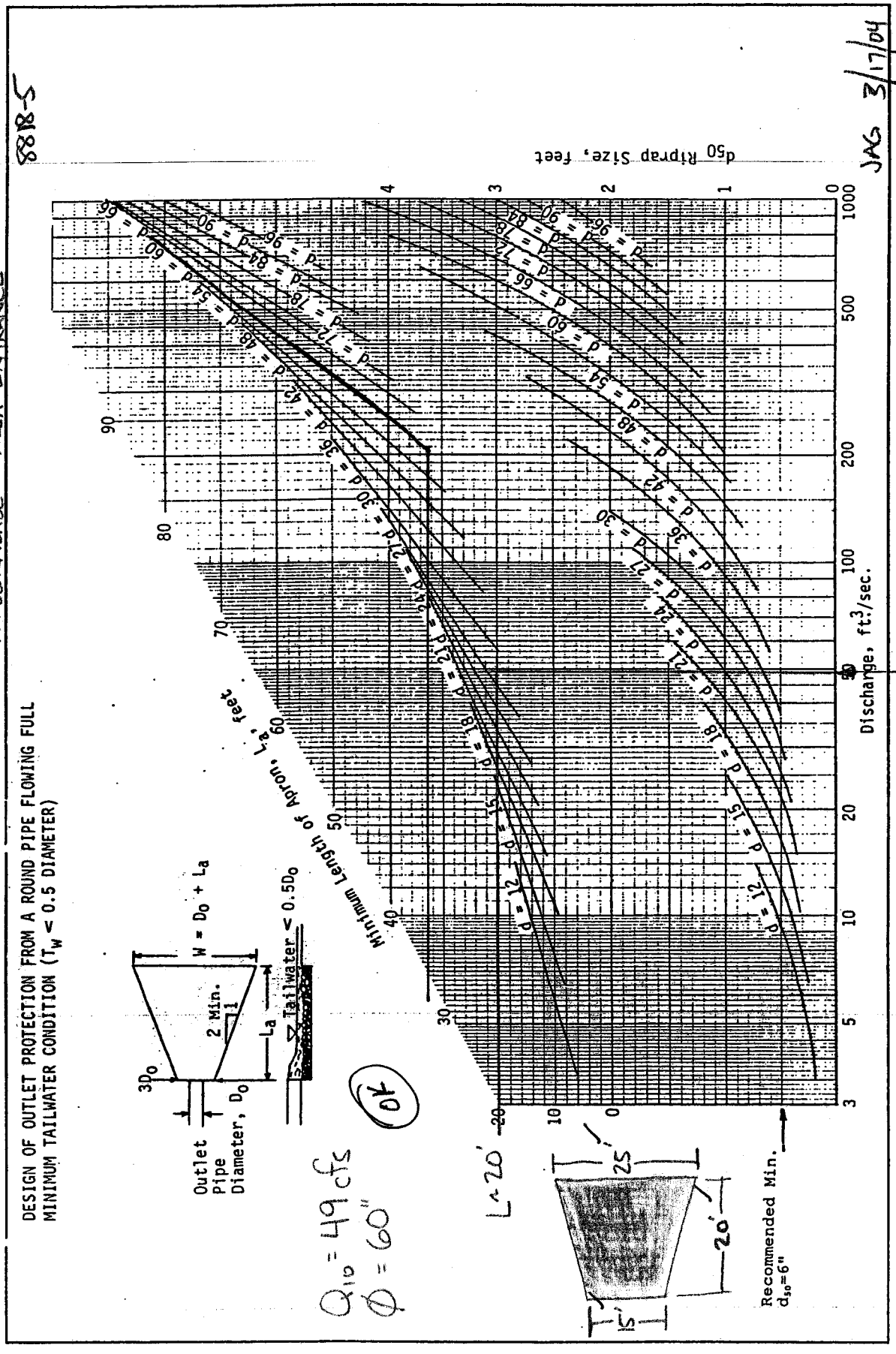
I GET OUTLET CONTROL HW = 49.09

V = 11.76 FPS

CULVERT BARREL SELECTED:

SIZE: 60"
SHAPE: CIRCULAR
MATERIAL: CONCRETE n.
ENTRANCE: HEADWALL

44.7
1.3
46.0



Source: USDA-SCS

Plate 3.18-3

WINDSORMEADE
Of Williamsburg

Calculations
For
James City County Environmental Division

SP-05-04
2ND SUB

Prepared by

AES CONSULTING ENGINEERS
AES Consulting Engineers
5248 Olde Towne Road. Suite 1
Williamsburg, VA 23188
(757) 253-0040 Fax: (757) 220-8994
http://www.aesva.com

Pond Report

Hydraflow Hydrographs by Intelisolve — Monday, Mar 29 2004, 2:58 PM

Pond No. 6 - WM VILLA CROSSING

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	46.00 ✓	2,631	0	0
2.00	48.00	10,353	12,984	12,984
4.00	50.00	24,303	34,656	47,640
6.00	52.00 CREST 6/.25	43,172	67,475	115,115

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 60.00 ✓	0.00	0.00	0.00
Span (in)	= 60.00	0.00	0.00	0.00
No. Barrels	= 1 ✓	0	0	0
Invert El. (ft)	= 46.00 ✓	0.00	0.00	0.00
Length (ft)	= 50.00 ✓	0.00	0.00	0.00
Slope (%)	= 2.60 ✓	0.00	0.00	0.00
N-Value	= .013 ✓	.000	.000	.000
Orif. Coeff.	= 0.60	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

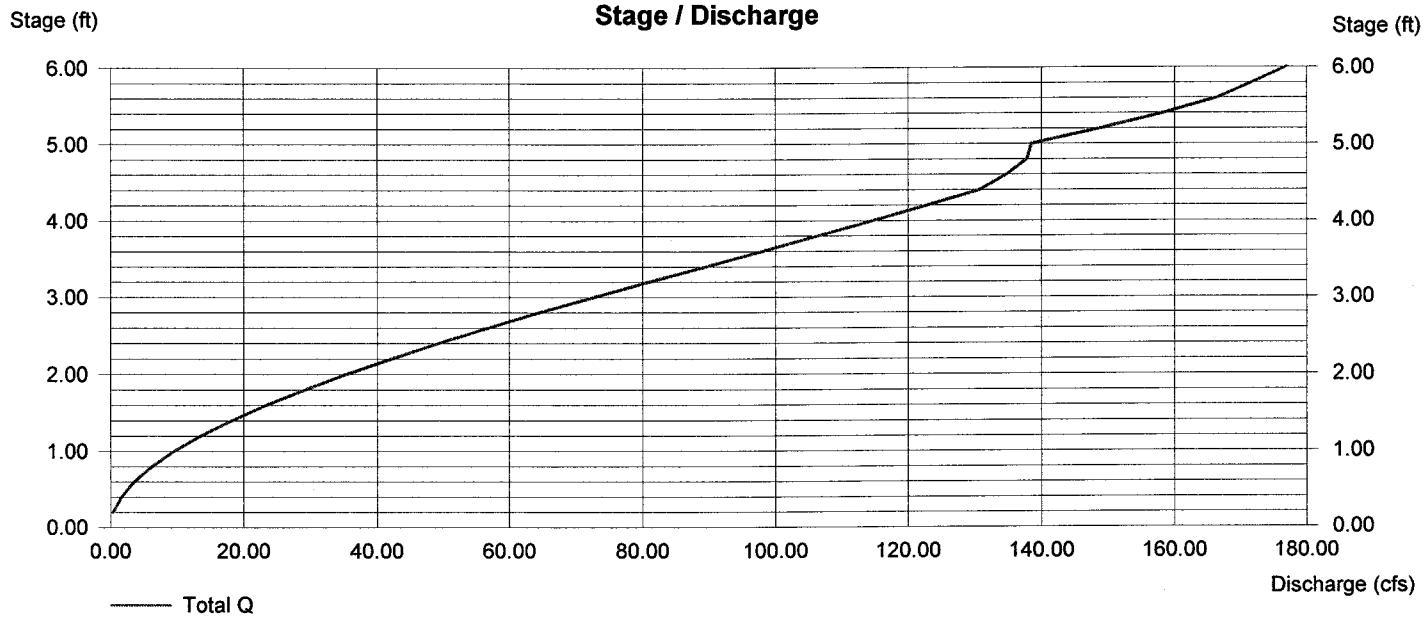
	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 0.00	0.00	0.00	0.00
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 46.01 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.

V = ?

47.07
1-YR. 47.44
2-YR. 48.40
10-YR. 49.24
100-YR.



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Monday, Mar 29 2004, 2:58 PM

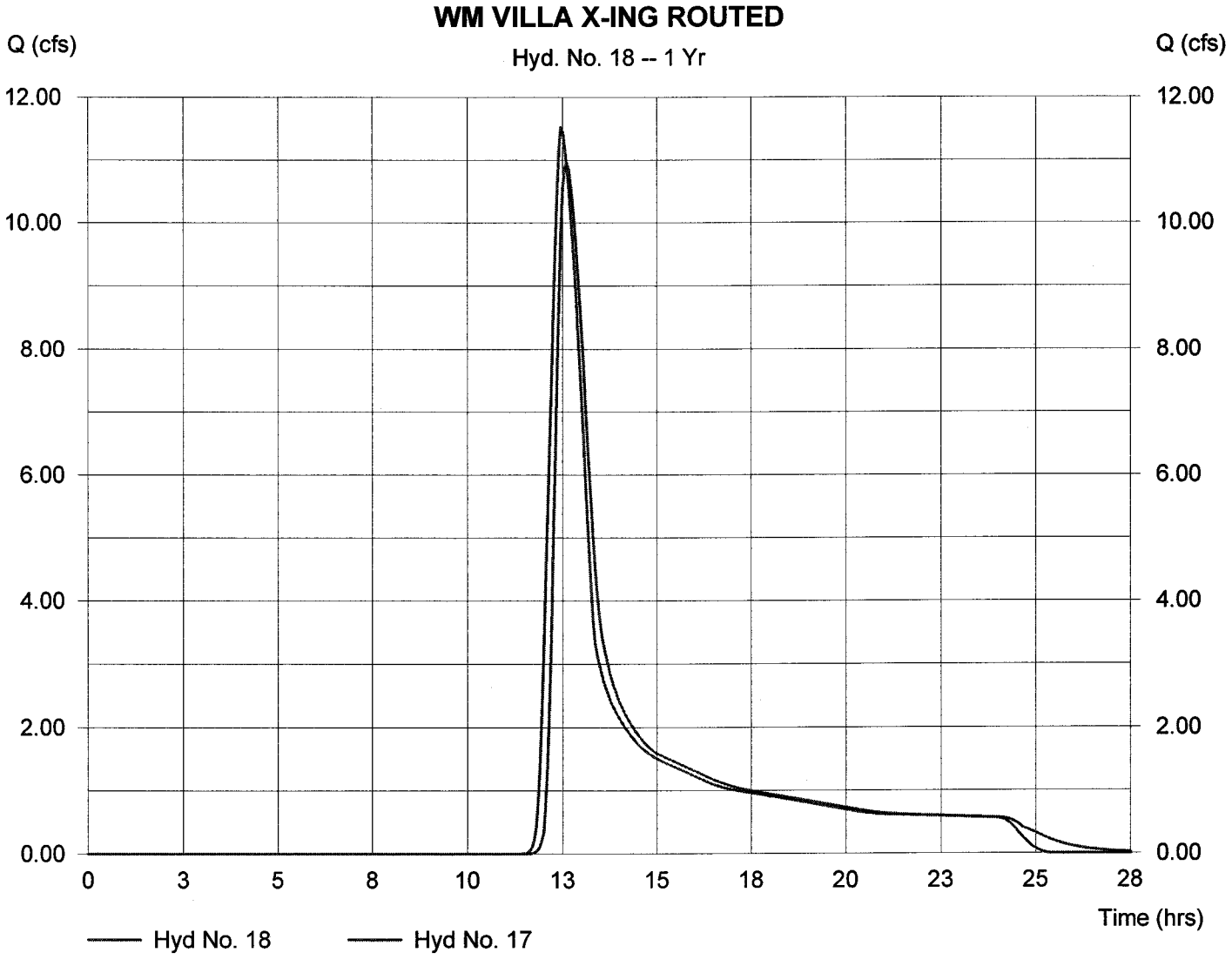
Hyd. No. 18

WM VILLA X-ING ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 10.96 cfs
Storm frequency	= 1 yrs	Time interval	= 3 min
Inflow hyd. No.	= 17	Max. Elevation	= 47.07 ft
Reservoir name	= WM VILLA CROSSING	Max. Storage	= 6,954 cuft

Storage Indication method used.

Hydrograph Volume = 80,330 cuft



Hydrograph Plot

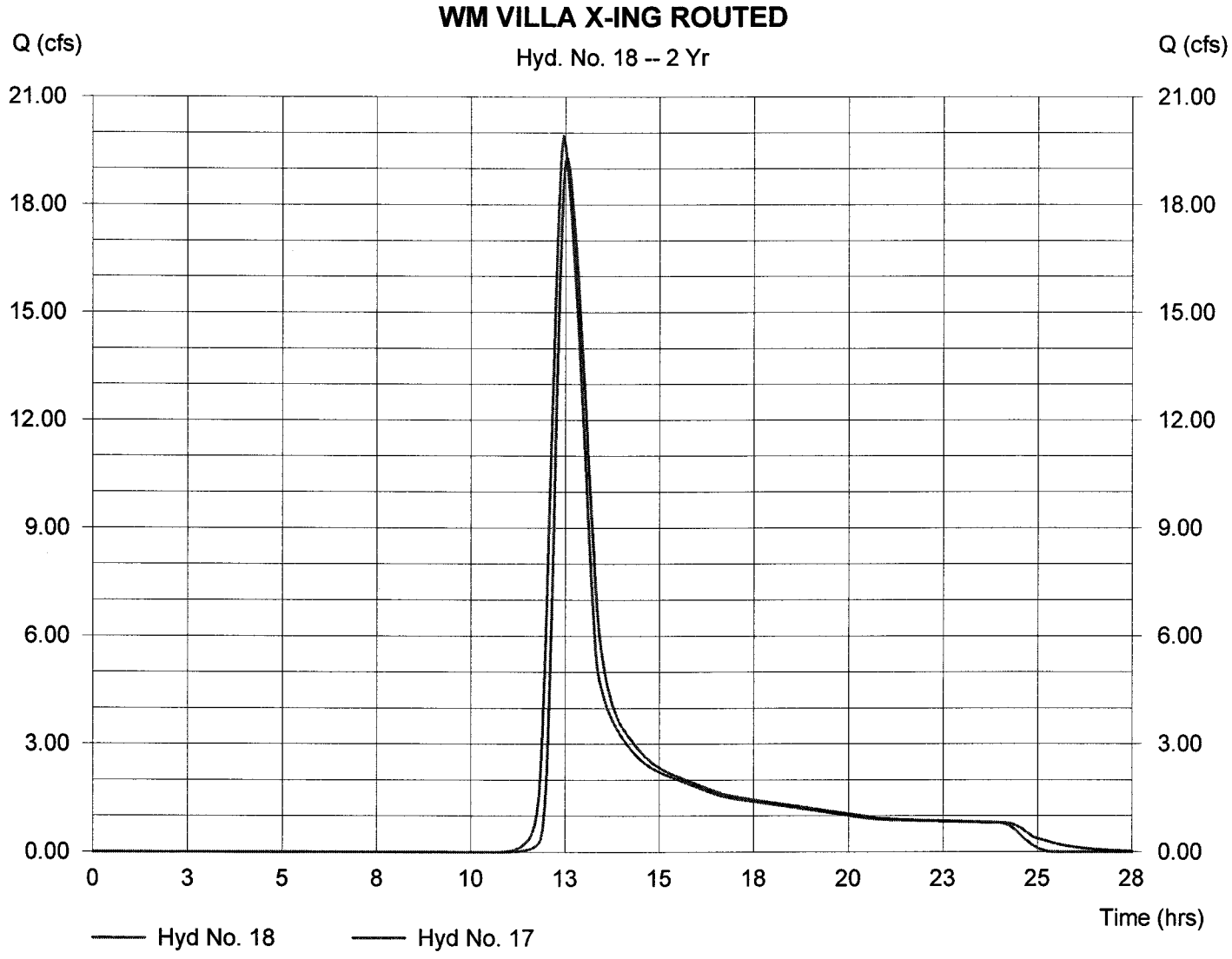
Hydraflow Hydrographs by Intelisolve | Monday, Mar 29 2004, 2:58 PM

Hyd. No. 18

WM VILLA X-ING ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 19.29 cfs
Storm frequency	= 2 yrs	Time interval	= 3 min
Inflow hyd. No.	= 17	Max. Elevation	= 47.44 ft
Reservoir name	= WM VILLA CROSSING	Max. Storage	= 9,377 cuft

Storage Indication method used. | Hydrograph Volume = 128,565 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Monday, Mar 29 2004, 2:58 PM

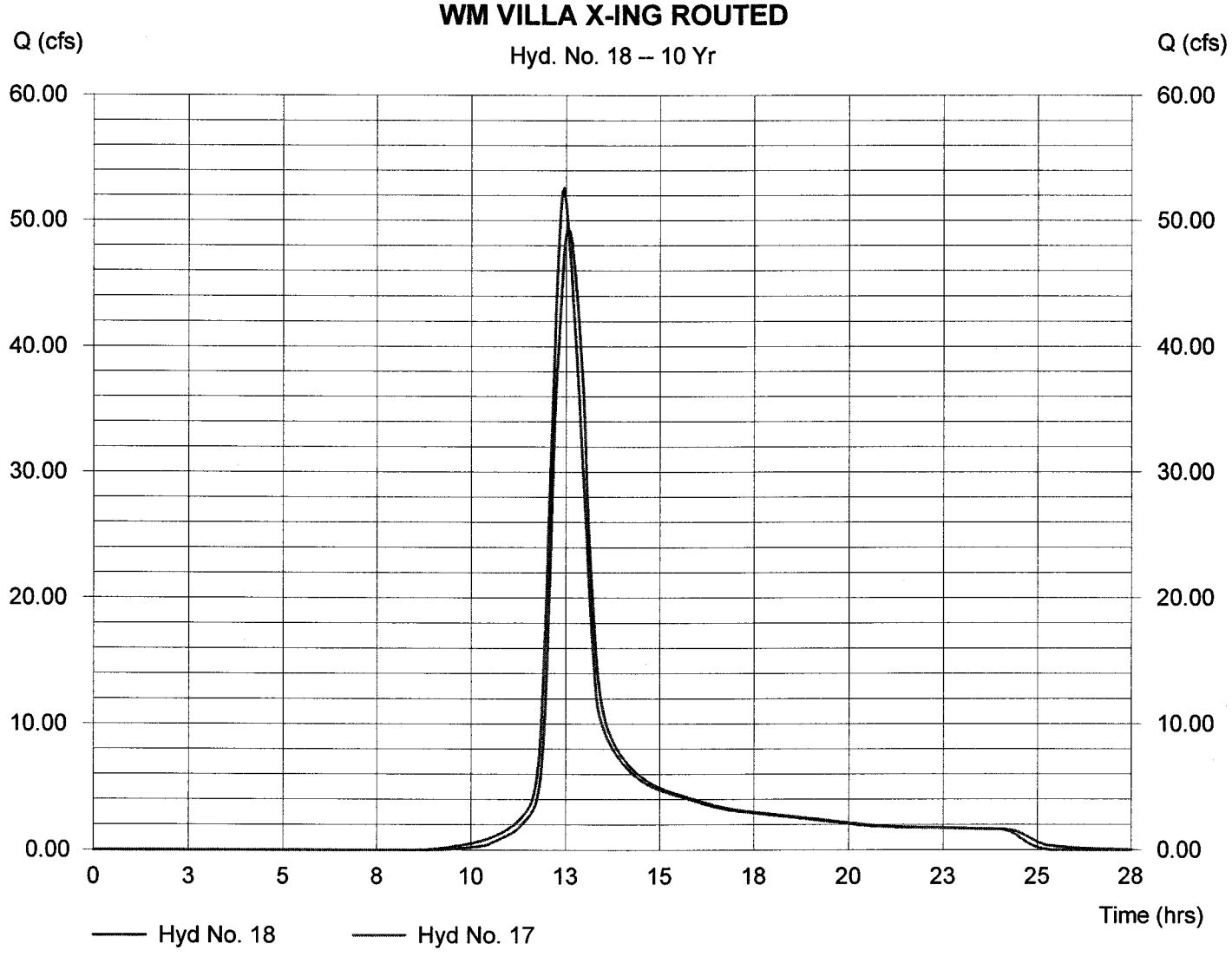
Hyd. No. 18

WM VILLA X-ING ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 49.37 cfs
Storm frequency	= 10 yrs	Time interval	= 3 min
Inflow hyd. No.	= 17	Max. Elevation	= 48.40 ft
Reservoir name	= WM VILLA CROSSING	Max. Storage	= 19,996 cuft

Storage Indication method used.

Hydrograph Volume = 318,626 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Monday, Mar 29 2004, 2:58 PM

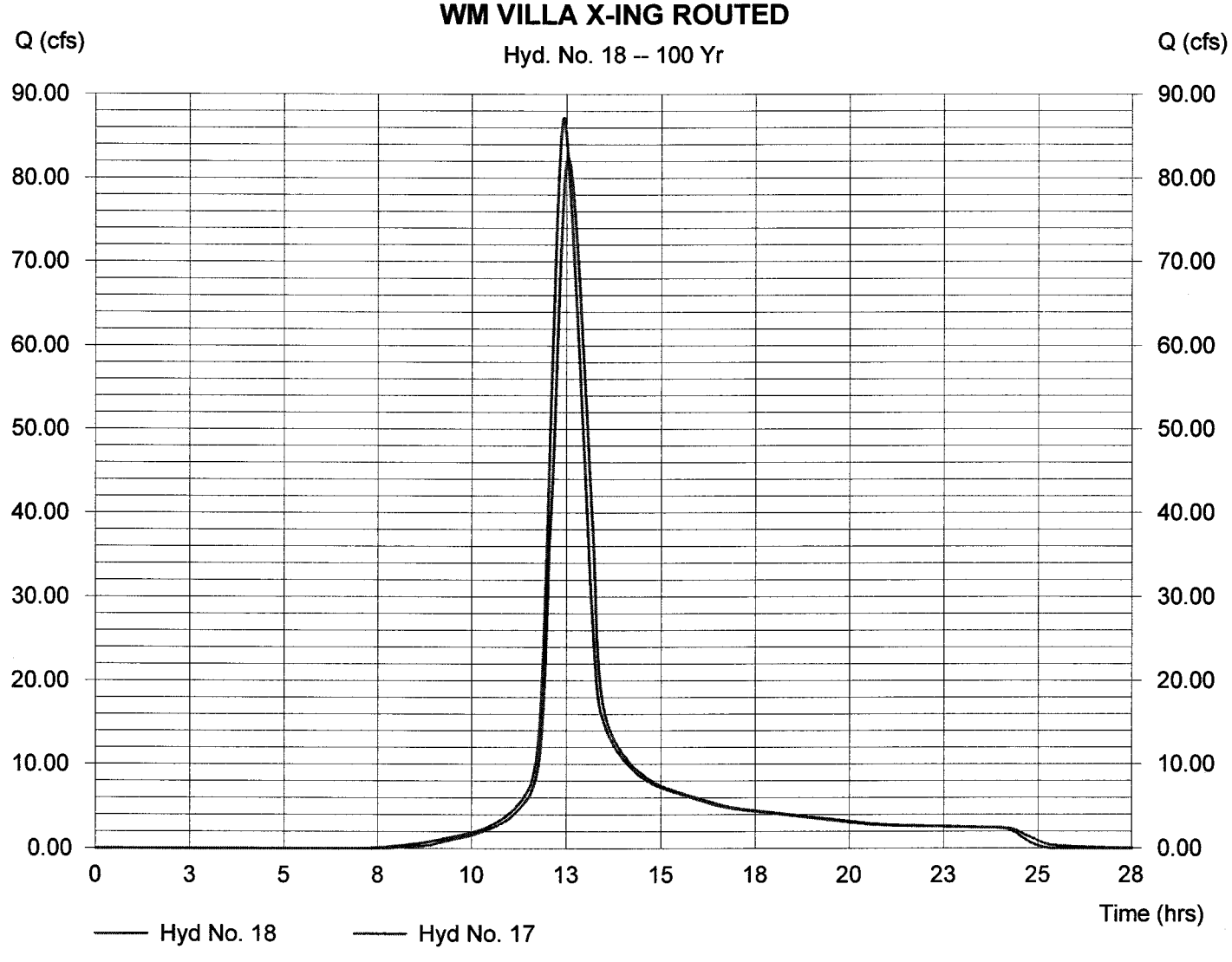
Hyd. No. 18

WM VILLA X-ING ROUTED

Hydrograph type	= Reservoir	Peak discharge	= 82.45 cfs
Storm frequency	= 100 yrs	Time interval	= 3 min
Inflow hyd. No.	= 17	Max. Elevation	= 49.24 ft
Reservoir name	= WM VILLA CROSSING	Max. Storage	= 34,427 cuft

Storage Indication method used.

Hydrograph Volume = 524,232 cuft



Culvert Calculator Report
Worksheet-1

Solve For: Headwater Elevation

Culvert Summary			
Allowable HW Elevation	61.25 ft	Headwater Depth/ Height	0.61
Computed Headwater Elevation	49.06 ft	Discharge	49.00 cfs (10-YEAR)
Inlet Control HW Elev	48.69 ft	Tailwater Elevation	46.00 ft
Outlet Control HW Elev	49.06 ft	Control Type	Entrance Control

Grades			
Upstream Invert	46.00 ft	Downstream Invert	44.70 ft
Length	50.00 ft	Constructed Slope	0.026000 ft/ft

Hydraulic Profile			
Profile	S2	Depth, Downstream	1.32 ft
Slope Type	Steep	Normal Depth	1.15 ft ∠ 5'
Flow Regime	Supercritical	Critical Depth	1.96 ft
Velocity Downstream	11.76 ft/s	Critical Slope	0.003352 ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	5.00 ft
Section Size	60 inch	Rise	5.00 ft
Number Sections	1		

Outlet Control Properties			
Outlet Control HW Elev	49.06 ft	Upstream Velocity Head	0.73 ft
Ke	0.50	Entrance Loss	0.37 ft

Inlet Control Properties			
Inlet Control HW Elev	48.69 ft	Flow Control	Unsubmerged
Inlet Type	Square edge w/headwall	Area Full	19.6 ft²
K	0.00980	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	1
C	0.03980	Equation Form	1
Y	0.67000		

SJT HEADWATER CHECK

WINDSORMEADE
Of Williamsburg

Calculations
For
James City County Environmental Division

SP-5-04
3rd SUBMITTAL

Prepared by

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CONSULTING ENGINEERS

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(757) 253-0040 • Fax (757) 220-8994 • E-mail aes@aesva.com

May 12, 2004

James City County Planning
Development Management
101-E Mounts Bay Road
Williamsburg, VA 23187-8784

RE: WindsorMeade – Villa Entrance and Sewer Construction
Former JCC Case No. SP-005-04
AES Project No. 8818-05

Dear Mr. Anderson:

This letter is a response to the requested changes or revisions to the WindsorMeade Villa Entrance site plan. Changes or revisions were made to these documents to address the items provided in your letter of February 10, 2004.

Planning:

Item 1: Whorled Pogonia Survey
The whorled pogonia survey is still awaiting final approval and will be forwarded to the county as soon as it is available.

County Engineer:
No comments to address

Fire Department:
No comments to address

VDOT:
No comments to address

JCSA:

General

Item 1: Fire Flow Required for Windsor Hall
ISO calculations have been submitted to the fire department directly and to JCSA with this plan submission for review. We have decided to upsize the lines within the hall plan from

8" to 12" in advance of the fire department review due to future buildout of the site. This has allowed the site to reach the 2500 gpm county requirement.

Sheet No. 3

Item 1: Manhole Rim Elevations
The manhole rim elevations have been verified and updated as necessary.

Item 2: Temporary Grading
The temporary grading at the end of the proposed roadway has been shown in profile as requested.

Sheet No. 4

Item 1: MH# 21
The depth of MH#21 has been updated.

Item 2: MH# 23
The depth of MH#23 has been updated.

Item 3: Culvert Note
The culvert crossing note has been updated to "...joint centered under existing culvert" as requested.

Item 4: Pipe Length and slope beyond MH # 23
The pipe length and slope has been corrected in plan and profile.

Sheet No. 5

Item 1: Existing Easements
The leader lines identifying the existing easements have been provided.

Sheet No. 6

Item 1: Water and Sewer Utilities
The utilities have been added (screened) to the erosion and sediment control sheet as requested.

Sheet No. 10

Item 1: Note 7
Note 7 has been updated. The note now indicates that a JCSA approved paint scheme shall be used on the interior and exterior of the vault.

Item 2: Paint Scheme

The paint scheme table as provided by JCSA has been added to the detail sheet for reference.

Item 3: Grading around Vault

The finish grade has been added to the detail 6" below the top and sloping away from the vault.

Item 4: Drain Line

The drain line has been indicated on the detail and shown on sheets 3 and 7 as requested.

Item 5: Coupling

The coupling has been removed from the vault detail as requested.

Item 6: Wall Sleeve

Wall sleeves and link seals have been indicated as requested.

Sewer Data Sheet

Item 1: Pipe Lengths

Pipe lengths have been verified based on the plan layout.

Item 2: Average MH Depths

The MH depths have been revised.

Water Data Sheet

Item 1: Windsor Hall Domestic Demands

Information on the Hall domestic demands has been provided.

Item 2: Pipe Lengths

Pipe lengths have been verified based on the plan layout.

Item 3: Water Meter

The required water meter size has been added to the data sheet as requested.

Item 4: Supporting Documentation for 5F

The maximum day plus fire calculation is provided at the "worst case" node during the fire flow event. Since there are no hydrants proposed on this plan, the worst case hydrant was taken on from the Hall site (node H-6).

Item 5: Supporting Documentation for 5H

All supporting documentation that is available for the hydrant flow tests has been provided with the model.

Water Distribution Model

Item 1: Max Day w/Fire Flows

As requested, the fire flow designation has been removed from the maximum day demand scenario.

Item 2: Pipes less than 8 inches

The pipes less than 8" have not been removed. These should have no significant effect on the model and would eliminate a majority of the pipes within the villa section which has 6" mains.

Item 3: Pipe lengths

The pipe lengths applied within the model are approximate based on a scaled overlay of the system but are adequate to represent the flows and pressures within the system. If there is a certain question about the pipe lengths please feel free to contact Marc Bennett or myself.

Item 4: Fire flow of 2500gpm

A fire flow of 2500gpm has been added to the hydrant locations around Windsor Hall.

Item 5: Pump and Reservoir Reports

Pump and reservoir reports have been added to each scenario as requested.

Environmental Department:

Chesapeake Bay Preservation:

Item 1: RPA Wetlands

It is understood that the perennial stream issue is still outstanding. Please contact us as soon as more direction can be given on this issue.

Erosion & Sediment Control Plan:

Items 2: Outlet Protection

The outlet protection has been labeled on sheet 6 as requested.

Stormwater Management/Drainage:

Item 3: Culvert Crossing

The calculated water surface elevations at the culvert crossing have been indicated as requested.

Item 4: Villa Entrance BMP

A stilling basin has been added as a pretreatment device and calculations have been provided.

Item 5: BMP Details

Notation on the riser structure and base has been added to the BMP cross-section (the VDOT Junction box has a standard 10" thick base). In the EW-11 detail notation about the removable bar grate/trash rack has been added. The sediment basin dewatering detail has been modified to indicate a galvanized steel strap to attach the dewatering tube to the riser.

I would like to thank you and the other agencies involved for their assistance in the review of this project. Should any further questions arise, please feel free to contact us.

Sincerely,

AES Consulting Engineers

Jason Grimes
Project Engineer

S:\JOBS\8818\05-WM_Villa Site\Wordproc\Document\Entrance\881805l02.entrance.jag.doc

FOREBAY SIZING
(WM Villa Entrance- EX. Detention Dry Pond)

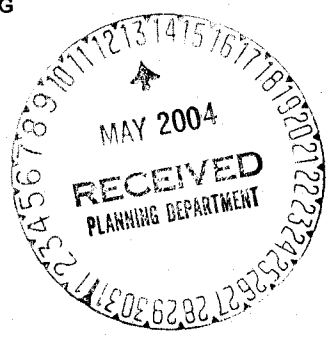
5/11/2004
by JAG

Impervious Acres to Storm System 1	0.70 Ac.	
@ 0.25 inches / impervious Acre =	635 cu. Ft.	
	24 cu. Yd.	
@ 0.1 inches / impervious Acre =	254 cu. Ft.	
	9 cu. Yd.	
Volume Provide =	296 cu. Ft. (10'x10' STILLING BASIN)	

Elevation	Depth	Area (sq. ft.)	Incremental Volume (cu. ft.)	Inc. Volume (cu. yd.)	Sum Volume (cu. ft.)	Sum Volume (cu. yd.)
54.0		100	0			
56.0	2.0	196	296	11	296	11

FOREBAY SIZING
(WM Villa Entrance- EX. Detention Dry Pond)

5/11/2004
by JAG



Impervious Acres to Storm System 1 — 0.70 Ac.

@ 0.25 inches / impervious Acre = 635 cu. Ft. / 24 cu. Yd.

@ 0.1 inches / impervious Acre = 254 cu. Ft. / 9 cu. Yd.

Volume Provide = 296 cu. Ft. (10'x10' STILLING BASIN)

Elevation	Depth	Area (sq. ft.)	Incremental Volume (cu. ft.)	Inc. Volume (cu. yd.)	Sum Volume (cu. ft.)	Sum Volume (cu. yd.)
54.0		100	0			
56.0	2.0	196	296	11	296	11

1161 permit

RECEIVED

DEC 17 2002

Wmsbg Environmental Grp

U.S. Army Corps
Of Engineers
Norfolk District

Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

DEPARTMENT OF THE ARMY PERMIT

Permittee: Virginia United Methodist Homes
Mr. William Jeryl Fink
7113 Three Chopt Road
Richmond, Virginia 23226

August 23, 2002

DUPLICATE

Permit No.: 02-V0454-18
Issuing Office: Norfolk District, Corps of Engineers

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

Project Description: You plan to construct a 2 lane primary entrance road to the proposed WindsorMeade of Williamsburg development which will be located on a portion of the Casey Tract/New Town Property. The road design allows for several future spurs off this primary roadway. The roadway will be constructed separately from the WindsorMeade development, because it will provide access to additional future development activities.

Construction of the proposed 3200+ foot long road would entail 4 different areas of fill or crossings of jurisdictional wetlands. The location and extent of the proposed roadway and associated roadway fills are depicted on the drawing entitled "*Wetland Impacts Map, WindsorMeade Way, James City County, Virginia*" prepared by Williamsburg Environmental Group and dated February 15, 2002 (copy attached). The roadway would result in cumulative impacts to approximately 0.38 acres of forested wetlands and 56.58 linear feet (0.04 acres) of intermittent stream channel. The 2 wetland road crossings will be culverted. The culverts will be countersunk a minimum of 2 inches to ensure hydrologic connectivity between the wetlands traversed by this access road.

You have proposed to compensate for the unavoidable project impacts to waters of the United States (including wetlands) at an offsite location. An actual mitigation plan or proposal has not been provided. Project Specific Conditions #5-#9 below address compensatory mitigation requirements.

Project Location: The project site is located at 4692 Old News Road on a larger undeveloped parcel in James City County, Virginia (PIN 3830100034). The work would occur in wetlands located above the headwaters of Cool Springs Swamp, a tributary of Powhatan Creek. The project location map is attached.

Project Specific Conditions:

1. Prior to the commencement of any work authorized by this permit, you shall advise Mr. Steven Martin in writing (letter, e-mail, or FAX) at: Norfolk District, Army Corps of Engineers, Regulatory Branch, 803 Front Street, Norfolk, Virginia 23510, steven.m.martin@usace.army.mil, (757) 41-7678 (FAX) of the time the authorized activity will commence and the name and telephone number of all contractors or other persons performing the work. A copy of this permit and drawings must be provided to the contractor and made available to any regulatory representative during an inspection of the project site.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

3. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

4. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time that the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 3 above).

c. Significant new information surfaces, which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

5. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as a permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Wm. [illegible] Smith
(Permittee) President

SIG HER

12/6/02
(Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Steven Martin
for Nicholas L. Konchuba
Chief, Eastern Virginia
Regulatory Section

12/13/02
(Date)

Special Conditions:

1. No discharge of dredged or fill material may consist of unsuitable material (e.g.: trash, debris, car bodies, asphalt etc.) and material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
2. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.
3. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date.
4. The construction or work authorized by this permit will be conducted in a manner so as to minimize any degradation of water quality and/or damage to aquatic life. Also, you will employ measures to prevent or control spills of fuels or lubricants from entering the waterway.
5. Any heavy equipment working in wetlands must be placed on mats or other measures must be taken to minimize soil disturbance.
6. Failure to comply with the terms and conditions of this permit can result in enforcement actions against the permittee and/or contractor.
7. In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.
8. All filling will be done so as to minimize disturbance of the bottom or turbidity increases in the water, which tend to degrade water quality and damage aquatic life.

General Conditions:

1. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Conditions 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
2. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
3. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.
4. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
5. The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army of his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required upon due notice from the Corps of Engineers to remove, relocate, or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the Untied States on account of any such removal or alternation.

Further Information:

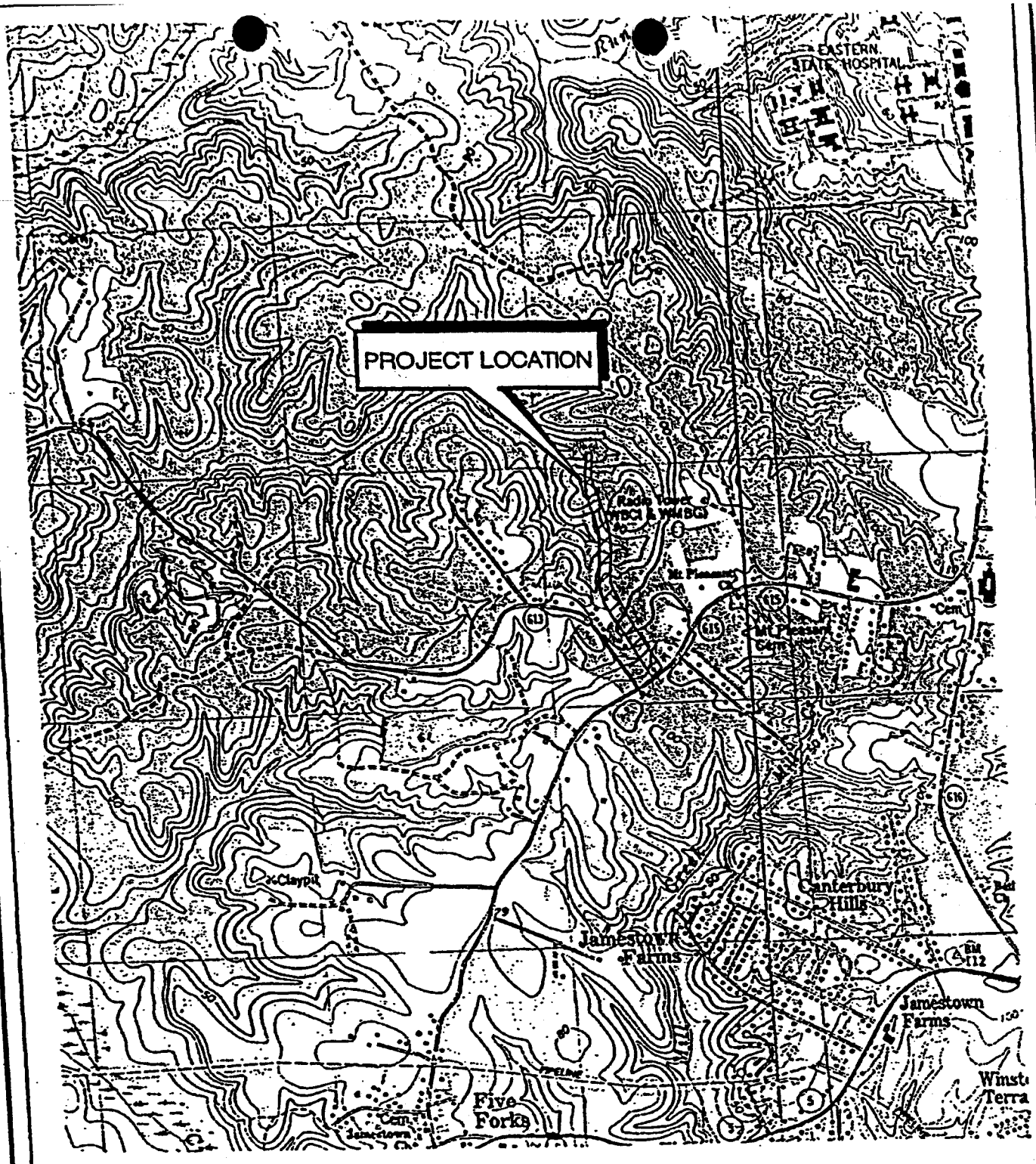
1. Limits of this authorization:
   a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal projects.

2. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____
(Transferee)

_____
(Date)



2000' 1000' 0' 2000'

SCALE: 1 INCH = 2000 FEET

LATITUDE: 37°16'24"
LONGITUDE: 76°45'18"

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP, NORGE, VA QUADRANGLE, 1984.

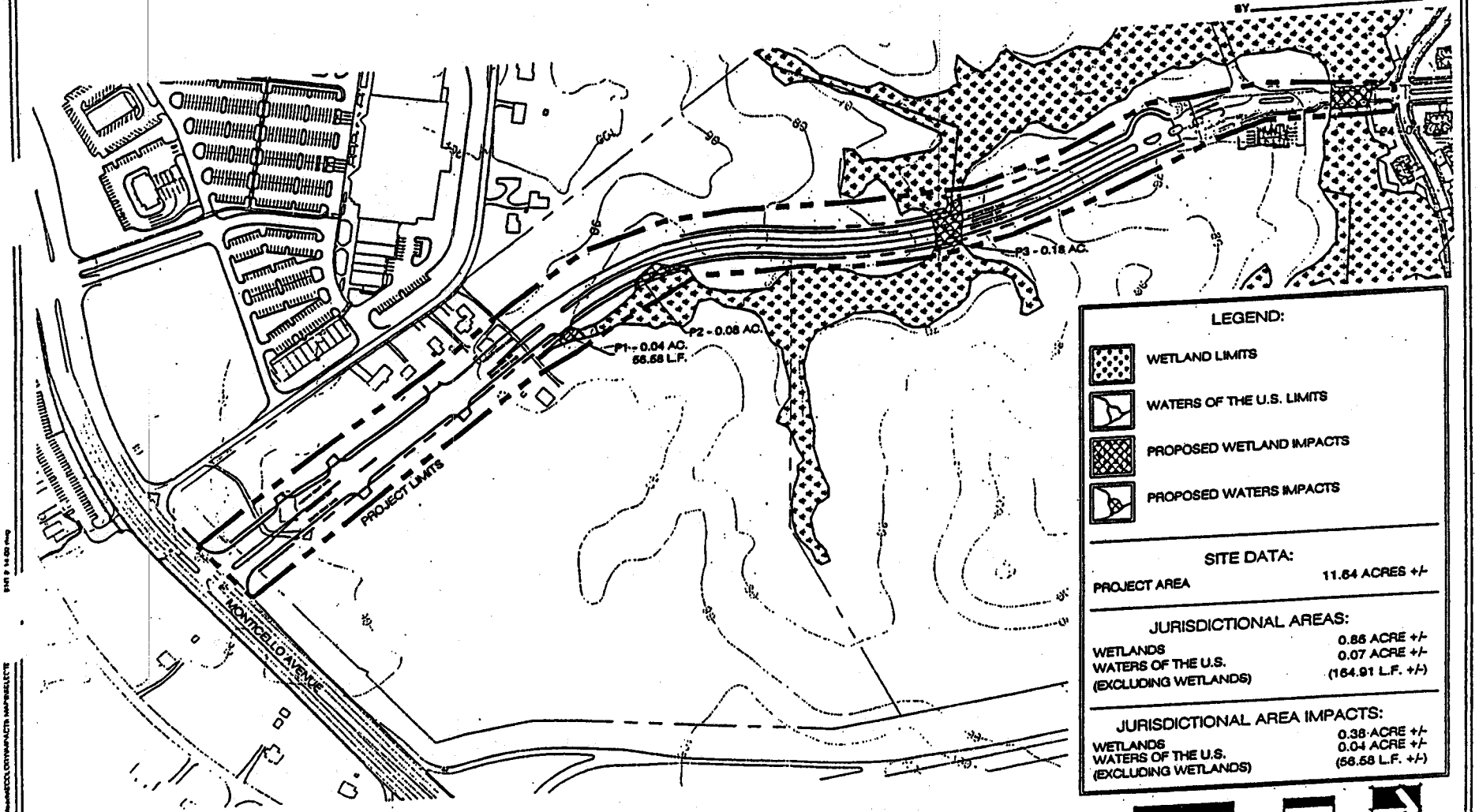
WILLIAMSBURG ENVIRONMENTAL GROUP, INC.

FIGURE 1-2

PROJECT LOCATION MA

WINDSORMEADE WAY

JAMES CITY CO., VA | MARCH 2002



LEGEND:

- WETLAND LIMITS
- WATERS OF THE U.S. LIMITS
- PROPOSED WETLAND IMPACTS
- PROPOSED WATERS IMPACTS

SITE DATA:

PROJECT AREA	11.64 ACRES +/-

JURISDICTIONAL AREAS:

WETLANDS	0.86 ACRE +/-
WATERS OF THE U.S. (EXCLUDING WETLANDS)	0.07 ACRE +/- (164.91 L.F. +/-)

JURISDICTIONAL AREA IMPACTS:

WETLANDS	0.38 ACRE +/-
WATERS OF THE U.S. (EXCLUDING WETLANDS)	0.04 ACRE +/- (56.58 L.F. +/-)

250' 0' 125' 250'

WETLAND IMPACTS MAP
WINDSORMEADE WAY

WILLIAMSBURG ENVIRONMENTAL GROUP, INC.

DATE: FEBRUARY 15, 2002
JOB NUMBER: 1161
SCALE: 1 INCH = 250 FEET

DATE: FEBRUARY 15, 2002
REVISED:
JOB NUMBER: 1161
SCALE: 1 INCH = 450 FEET
SOURCE: BASE MAP PROVIDED BY AES CONSULTING ENGINEERS

FIGURE 2-1
WETLAND IMPACTS MAP
WINDSORMEADE OF WILLIAMSBURG
JAMES CITY COUNTY, VIRGINIA

WILLIAMSBURG ENVIRONMENTAL GROUP, INC.
Environmental Co

U.S. Army Corps
Of Engineers
Norfolk District

Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

DEPARTMENT OF THE ARMY PERMIT

Permittee: Virginia United Methodist Homes
Mr. William Jeryl Fink
7113 Three Chopt Road
Richmond, Virginia 23226

August 29, 2003

Permit No.: **02-V1074-18**

Issuing Office: Norfolk District, Corps of Engineers

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

Project Description: You plan to develop a master-planned continuing care retirement community, including community center, dining facility, wellness and health center, outdoor recreational areas, villas, and apartments on 113 acres within the Casey/New Town development area of James City County, Virginia. This proposal entails impacts to 0.643 acres of jurisdictional wetlands. These impacts are associated with 2 road crossings, villa development, a utility crossing, and grading associated with construction of 3 stormwater management facilities. The location and extent of the proposed project wetland impacts are depicted on the drawing entitled "*Selected Alternative, Wetland Impacts Map, WindsorMeade of Williamsburg, James City County, Virginia*" prepared by Williamsburg Environmental Group, dated February 15, 2002, and revised February 4, 2003, May 13, 2003, May 28, 2003, June 2, 2003, and July 30, 2003 (copy attached).

The road crossings will impact 0.443 acres of forested wetlands. One crossing is perpendicular to the wetland system and will impact 0.28 acres of wetlands. That crossing will be culverted to ensure hydrologic connectivity between the wetlands traversed by this road. The second road crossing is associated with adjoining lot fill and will not be culverted. It would impact 0.163 acre of wetlands. Lot development will entail fill of 0.04 acres of wetlands. Grading associated with construction of 3 stormwater management facilities would impact approximately 0.08 acres of wetlands. Another 0.08 acres of wetlands will be impacted by utility installation.

You have proposed to compensate for unavoidable project wetland impacts through a combination of offsite wetland restoration and creation and onsite preservation of forested wetlands and forested upland buffers, including endangered species habitat. Wetlands would be restored on agricultural lands in the headwaters of Glebe Creek, a tributary of the James River in Charles City County, Virginia. The location and extent of the proposed wetland restoration and creation for this and several related projects is depicted on the drawings entitled "*Conceptual Offsite Mitigation Plan, New Town, WindsorMeade, and WindsorMeade Way, Charles City County, Virginia*" prepared by Williamsburg Environmental Group, dated December 20, 2002, and revised January 22, 2003 and "*Wetland Compensation Plan, Harrison Ruffin Property, Charles City County, Virginia*" prepared by Williamsburg Environmental Group and dated April 21, 2003, and revised April 29, 2003, May 2, 2003, May 15, 2003, and July 29, 2003. Approximately 6.43 acres of wetlands and upland buffers would be preserved onsite.

Project Location: The project site is located at 4692 Old News Road on 113 acres in James City County, Virginia (PIN 3830100034). The work would occur in wetlands located above the headwaters of Powhatan Creek, a tributary of the James River. The project location map is attached.

Project Specific Conditions:

1. Prior to the commencement of any work authorized by this permit, you shall advise **Mr. Steven Martin** in writing (letter, e-mail, or FAX) at: **Norfolk District, Army Corps of Engineers, Regulatory Branch, 803 Front Street, Norfolk, Virginia 23510**, steven.m.martin@usace.army.mil, **(757) 441-7678 (FAX)** of the time the authorized activity will commence and the name and telephone number of all contractors or other persons performing the work. A copy of this permit and drawings must be provided to the contractor and made available to any regulatory representative during an inspection of the project site.
2. The time limit for completing the work authorized ends on **September 1, 2008**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached. Should you be unable to complete the authorized activity in the time limit provided, you must submit your request for a time extension to this office for consideration at least one month before the permit expiration date.
3. Drawings depicting the culverted road crossing must be submitted for review and approval by this office prior to initiating work in waters of the U.S. (including wetlands) on this property. The culverts must be countersunk a minimum of 2 inches to ensure hydrologic connectivity between the wetlands traversed by this access road.
4. Any revised drawings for this development project must be submitted to this office prior to initiation of work in waters of the U.S. (including wetlands) on this property.
5. The residual wetland areas on this property (those areas that will not be impacted under this permit) that are located within 100 feet of the proposed clearing, excavation, and construction activities must be clearly marked in the field (flagged or fenced) prior to commencing work onsite to ensure that additional wetland areas are not inadvertently impacted.
6. Compensatory mitigation will be required for impacts to 0.643 acres of wetlands. The final mitigation plan must be consistent with Norfolk District's Regulatory Branch Guidance for Wetlands Compensation Permit Conditions and Performance Criteria dated December 1995 (copy enclosed).
7. **All compensatory mitigation site work** (land disturbance) associated with this project and depicted on the drawings entitled "*Conceptual Offsite Mitigation Plan, New Town, WindsorMeade, and WindsorMeade Way, Charles City County, Virginia*" prepared by Williamsburg Environmental Group, dated December 20, 2002, and revised January 22, 2003 and "*Wetland Compensation Plan, Harrison Ruffin Property, Charles City County, Virginia*" prepared by Williamsburg Environmental Group and dated April 21, 2003, and revised April 29, 2003, May 2, 2003, May 15, 2003, and July 29, 2003 **must be completed not later than completion of the wetland fills authorized under this permit.**
8. A drawing accurately depicting the location and extent of the onsite preservation areas that provide partial mitigation for this project must be submitted to this office within 30 days of initiation of wetland fills authorized under this permit.
9. The areas associated with compensatory mitigation (both offsite wetland restoration and onsite wetland and upland preservation areas) must be protected in perpetuity with a Corps-approved real estate instrument such as a restrictive covenant. **This real estate instrument must be recorded over the mitigation sites within 30 days of initiation of wetland fills authorized under this permit.** A sample instrument is attached for your consideration and use.
10. **A copy of the recorded real estate instrument(s) recorded over the mitigation areas (offsite wetland restoration and onsite wetland and upland preservation areas) must be forwarded to this office within 30 days of recordation.**
11. Should the wetland performance criteria specified in the Corps-approved final compensatory mitigation plan not be met at any time during the monitoring period, you must provide the Corps with a proposal detailing proposed corrective actions and/or maintenance actions and an implementation schedule for said actions. You shall implement the necessary corrective measures following Corps review and approval/modification of these measures. The Corps may require additional remedial actions if these actions do not result in satisfaction of performance criteria during the next subsequent growing season.
12. This Corps permit does not authorize you to take a federally-listed species, in particular the small whorled pogonia (*Isotria medeoloides*). The U.S. Fish and Wildlife Service's Biological Opinion for this project (copy attached) contains a number of Conservation Recommendations that would minimize impacts to the small whorled pogonia

and its habitat. You have voluntarily agreed to implement these Conservation Recommendations and your authorization under this Corps permit is conditional upon your compliance with these measures. The remaining measures will be required to complete implementation of these Conservation Recommendations:

a) Maintain the proposed buffer between the colony known as PC-M1 and the planned development as depicted on the drawing entitled *"Selected Alternative, Wetland Impacts Map, WindsorMeade of Williamsburg, James City County, Virginia"* prepared by Williamsburg Environmental Group, dated February 15, 2002, and revised February 4, 2003, May 13, 2003, May 28, 2003, June 2, 2003, and July 30, 2003;

b) Develop a legally binding restrictive covenant (declaration of restrictions, conservation easement, etc.) to be recorded over the proposed endangered species conservation areas. **This real estate instrument shall be in place (recorded) prior to initiation of work in wetlands,** shall be perpetual, and subject to approval by the Corps and USFWS prior to recordation. This instrument should not preclude removal of vegetation and shall allow for selective cutting of vegetation if determined by the USFWS to be beneficial to the small whorled pogonia. The instrument shall allow the Corps and USFWS and/or designated representatives' access to the site for monitoring purposes.

c) Establish and fund a program to monitor the status of the preserved colonies (PC-M1 and CR-M2) and any potential threats for 15 years following recordation of the restrictive covenant recorded over the proposed endangered species conservation areas. The monitoring plan is subject to USFWS approval. If threats severely impact these colonies, you have agreed to work with the USFWS to develop and implement a proposal to control these threats.

d) Clearly mark the preservation areas onsite with weatherproof signs prior to any construction or landclearing. These signs shall be placed and maintained along the entire boundary of the proposed endangered species conservation areas. The signs should identify these areas as being ecologically sensitive to discourage incompatible activities. The size, language and layout of the signs should be submitted to and approved by the USFWS.

13. Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the permit terms and conditions.

Special Conditions:

1. No discharge of dredged or fill material may consist of unsuitable material (e.g.: trash, debris, car bodies, asphalt etc.) and material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
2. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.
3. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date.
4. The construction or work authorized by this permit will be conducted in a manner so as to minimize any degradation of water quality and/or damage to aquatic life. Also, you will employ measures to prevent or control spills of fuels or lubricants from entering the waterway.
5. Any heavy equipment working in wetlands must be placed on mats or other measures must be taken to minimize soil disturbance.
6. Failure to comply with the terms and conditions of this permit can result in enforcement actions against the permittee and/or contractor.
7. In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.
8. All filling will be done so as to minimize disturbance of the bottom or turbidity increases in the water, which tend to degrade water quality and damage aquatic life.

General Conditions:

1. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Conditions 4 below. Should you

wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

2. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
3. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.
4. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
5. The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army of his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required upon due notice from the Corps of Engineers to remove, relocate, or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the Untied States on account of any such removal or alternation.

Further Information:

1. Limits of this authorization:
   a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal projects.

2. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
   e. Damage claims associated with any future modification, suspension, or revocation of this permit.
3. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
4. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time that the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
   a. You fail to comply with the terms and conditions of this permit.
   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 3 above).
   c. Significant new information surfaces, which this office did not consider in reaching the original public interest decision.

   Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.
5. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as a permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Wm. [illegible] President
(Permittee)

9/3/03
(Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

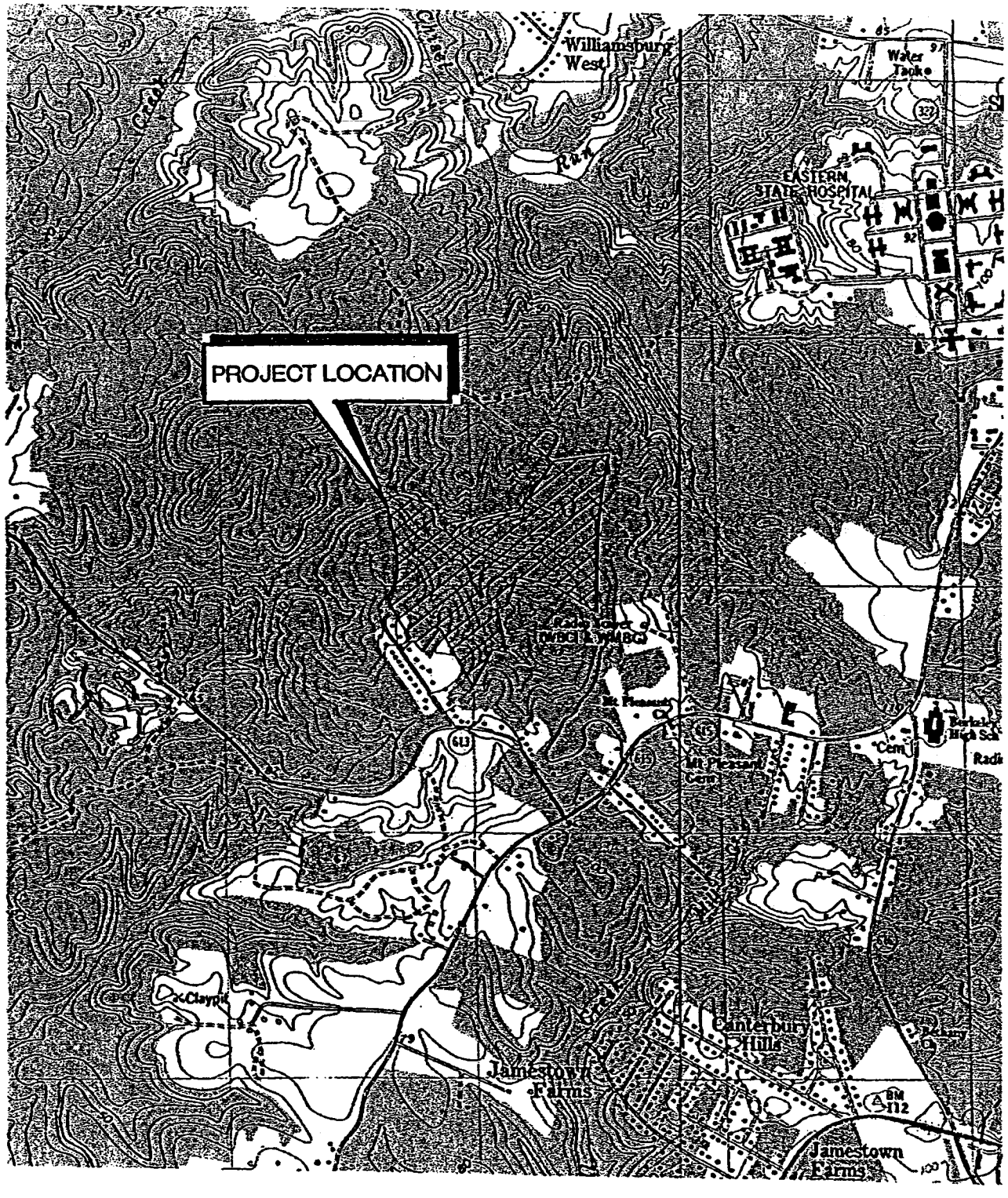
Nicholas L. Konchuba
Nicholas L. Konchuba
Chief, Eastern Virginia
Regulatory Section

9/25/03
(Date)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____
(Transferee)

_____
(Date)



2000' 1000' 0'

SCALE: 1 INCH = 2000 FEET

LATITUDE: 37°16'37"
LONGITUDE: 76°45'35"

SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP, NORGE, VA QUADRANGLE, 1984.

U. S. ARMY CORPS OF ENGINEERS
RECEIVED
MAY 20 2002
REGULATORY

WILLIAMSBURG ENVIRONMENTAL GROUP, INC.

FIGURE 1

PROJECT LOCATION MAP

WINDSORMEADE

JAMES CITY CO., VA

MARCH 2002

DUPLICATE

RECEIVED

FEB 0 9 2004

Wmsbg Environmental Grp

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
www.deq.state.va.us

Robert G. Burnley
Director

Francis L. Daniel
Tidewater Regional Director
(757) 518-2000

February 6, 2004

Mr. Wm. Jeryl Fink
Virginia United Methodist Homes
c/o Mr. David M. Ramsey
Williamsburg Environmental Group, Inc.
3000 Easter Circle
Williamsburg, Virginia 23188

RE: Final VWP Individual Permit
Virginia Water Protection Individual Permit Number 02-1074
New Town Development - Windsormeade of Williamsburg

Dear Mr. Fink:

Pursuant to the Virginia Water Protection (VWP) Permit Program Regulation 9 VAC 25-210-10 and § 401 of the Clean Water Act Amendments of 1977, Public Law 95-217, the Department of Environmental Quality (DEQ) has enclosed the original VWP individual permit for the above-referenced project involving construction of a master-planned continuing care retirement community.

The provisions and conditions contained therein according to § 401(a)(1) of the Clean Water Act requires that:

> "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge in the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of this Act."

This permit is valid for twelve years from the date of issuance. Re-issuance of the permit may be necessary if any portion of the authorized activities or any permit requirement have not been completed. The permit term, including any extensions, cannot exceed the maximum of 15 years.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have **30 calendar days** from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

Alternatively, any owner under §§62.1-44.16, 62.1-44.17 and 62.1-44.19 of the State Water Control Law aggrieved by any action of the board taken without a formal hearing, or by inaction of the board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the board. Said petition must meet the requirements set forth in §1.23(b) of the board's Procedural Rule Number 1 (9 VAC 25-230-10 et seq. of the Virginia Administrative Code). In cases involving actions of the board, such petition must be filed within **30 calendar days** after notice of such action is mailed to such owner by certified mail.

If you have any questions, please feel free to contact Sheri Kattan at 757-518-2156 or sakattan@deq.state.va.us.

Sincerely,

Bert W. Parolari, Jr.
Virginia Water Protection Permit Manager

Enclosures: Permit Cover Page, Part I - Special Conditions, Part II - General Conditions

cc: Steve Martin, U.S. Army Corps of Engineers
VWP permit file

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
www.deq.state.va.us

Robert G. Burnley
Director

Francis L. Daniel
Tidewater Regional Director
(757) 518-2000

VWP Individual Permit Number 02-1074
Effective Date: February 6, 2004
Expiration Date: February 5, 2016

VIRGINIA WATER PROTECTION PERMIT
ISSUED PURSUANT TO THE STATE WATER CONTROL LAW
AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner and in compliance with § 401 of the Clean Water Act as amended (33 USC 1251 et seq.) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The board finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment to state waters or fish and wildlife resources.

Permittee: Virginia United Methodist Homes

Address: 7113 Three Chopt Road
Richmond, Virginia 23226
Attn: Mr. Wm. Jeryl Fink

Activity Location: Directly west of Route 199 and north of Monticello Avenue in James City County, Virginia.

Activity Description: The permittee proposes construction of a master-planned continuing care retirement community associated with the New Town Development master plan.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions and Part II - General Conditions.

_____ (for)
Director, Department of Environmental Quality

2/6/04
Date

A. Authorized Activities

1. This permit authorizes impacts via fill and excavation to 0.64 acres of nontidal forested wetlands for construction of a master-planned, continuing care retirement community as part of the New Town development master plan prepared by AES Consulting Engineers entitled "New Town Plan" dated December 2, 1997. These authorized impacts are indicated in the Joint Permit Application dated March 2002 and signed on January 9, 2002 and supplemental materials, revisions and clarifications received through October 30, 2003; and site plans prepared by Williamsburg Environmental Group, Inc. and entitled, "Selected Alternative Wetland Impacts Map, Windsormeade of Williamsburg, James City County, Virginia" dated February 15, 2002 and last revised on July 30, 2003.

2. The project activities, including any conditions and limitations, described in the Joint Permit Application and any supplemental materials submitted by the applicant, or authorized agent, shall be adhered to for the term of this permit.

3. The permittee shall notify the Department of Environmental Quality Tidewater Regional Office Virginia Water Protection Permit (DEQ TRO VWPP) Program of any additional impacts to surface waters, including wetlands or any change to the type of wetland impacts, associated with this project. Any additional impacts to surface waters, including wetlands, or any change to the type of wetland impacts, shall be subject to individual permit review or modification of this permit, and compensation may be required.

4. This permit is valid for 12 years from the date of issuance. Reissuance of the permit may be necessary if any portion of the authorized activities or any permit requirement has not been completed. The original permit term and extension cannot exceed the maximum of 15 years.

B. Standard Project Conditions

1. The activities authorized by this permit shall be executed in a manner to minimize any adverse impact on stream beneficial uses, as defined in § 62.1-10(b) of the Code.

2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species that normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams shall be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. The activity shall not impede the passage of normal or expected high flows and the structure or discharge shall withstand expected high flows. Flows downstream of the project area shall be maintained to protect all uses.

3. The permittee shall conduct activities in accordance with the time-of-year (TOY) restrictions as recommended by the Department of Game and Inland Fisheries or as required by the Virginia Marine Resources Commission. The permittee shall maintain a copy of such TOY restriction or notification that no restriction is necessary, for the duration of the construction phase of the project.

4. All excavation, dredging, and/or filling in surface waters shall be accomplished in a manner that minimizes stream bottom disturbances and turbidity increases.

5. All non-impacted surface waters and required upland buffers within the project or right-of-way limits that are within fifty feet of any project activities shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that these marked areas are areas where no activities are to occur.

flagging non-impact w/in 50' of impact

6. Virginia Water Quality Standards shall not be violated in any surface water as a result of the project activities.

7. Temporary disturbances to wetlands during construction shall be avoided and minimized to the maximum extent practicable. All temporarily disturbed wetland areas shall be stabilized within 30 days of completing work in each respective impact area, restored to pre-construction conditions, and planted or seeded with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested). The permittee shall take all appropriate measures to promote revegetation of temporarily disturbed wetland areas with wetland vegetation by the second year post-disturbance. All temporary fills shall be removed in their entirety and the affected area returned to pre-existing contours.

8. Heavy equipment in temporarily impacted surface waters shall be placed on mats, geotextile fabric, or other suitable measures to minimize soil disturbance to the maximum extent practicable. Mats shall be removed as soon as the work is complete.

9. All materials (including fill, construction debris, and excavated and woody materials) temporarily stockpiled in wetlands shall be placed on mats or geotextile fabric, immediately stabilized to prevent entry into surface waters, managed such that leachate does not enter surface waters, and entirely removed within 30 days following completion of that construction activity. Disturbed areas shall be returned to original contours, stabilized within 30 days following removal of the stockpile, and restored to the original vegetated state.

10. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls shall be placed prior to clearing and grading and maintained in good working order to minimize impacts to surface waters. These controls shall remain in place until the area stabilizes.

11. Any exposed slopes or streambanks shall be stabilized immediately upon completion of work in each impact area in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.

12. The permittee shall employ measures to prevent spills of fuels, lubricants, or other pollutants into surface waters.

13. All construction, construction access (for example, cofferdams, sheetpiling, and causeways) and demolition activities associated with this project shall be accomplished in a manner that minimizes construction or waste materials from entering surface waters to the maximum extent practicable, unless authorized by this permit.

14. All fill material shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.

15. Wet or uncured concrete shall be prohibited from entry into surface waters.

16. No machinery may enter surface waters, unless authorized by this permit.

17. In issuing this permit, DEQ has not taken into consideration the structural stability of any proposed structure.

C. Construction Monitoring

1. A photo station shall be established at each impact site authorized by this permit. The photograph orientation at these stations shall remain constant during all monitoring events. The photographs shall document site activities and conditions, which should include installation and maintenance of erosion and sediment controls, flagged non-impact surface waters and required upland buffers, filling and excavation activities, pipe/culvert installation, and site stabilization activities. Photographs shall be taken prior to site activities, at the end of each month, and within one week of construction completion. Monthly photographs at each impact site shall not be required until construction activities are initiated at that site. Monthly photographs at each impact site shall not be required following completion of construction at that impact site and site stabilization. Each photograph shall be labeled to include the following information: permit number, impact area and photo station number, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.

D. Required Notifications and Submittals

1. All written communications required by this permit shall be submitted to the DEQ TRO VWPP Program. Please include the permit number on all correspondence.

2. All reports required by this permit and other information requested by the DEQ TRO VWPP Program shall be signed by the applicant or a person acting in the applicant's behalf, with the authority to bind the applicant. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

   c. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization shall be submitted to DEQ prior to or together with any separate information, or applications to be signed by an authorized representative.

3. All submittals required by this permit shall contain the following signed certification statement:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

4. Any fish kills or spills of fuels or oils shall be reported immediately upon discovery. If spills or fish kills occur between the hours of 8:15 AM to 5:00 PM Monday through Friday, DEQ TRO shall be notified at 757-518-2077; otherwise, the Department of Emergency Services shall be notified at 1-800-468-8892.

5. Violations of Virginia Water Quality Standards shall be reported within 24 hours to DEQ TRO at 757-518-2077.

6. DEQ shall be notified in writing when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

Construction

7. The DEQ TRO VWPP Program shall be notified in writing at least **ten days** prior to the start of activities authorized by this permit so that inspections of the project can be

planned, if deemed necessary. The notification shall include a projected schedule for completing work at the permitted impact area.

8. Construction monitoring reports shall be submitted to the DEQ TRO VWPP Program within **30 days** of each monitoring event. The reports shall include, as appropriate, the following:

   a. A written narrative stating whether work was performed, a description of the work performed at each impact area, when the work was initiated, and expected date of completion; a summary of activities conducted to comply with the permit conditions; a summary of permit non-compliance events or problems encountered, subsequent notifications, and corrective actions; a summary of anticipated work to be completed during the next reporting period; and an estimated date of project completion.

   b. A labeled site map depicting all impact areas and photo stations.

   c. Properly labeled photographs as described in Part I Section C.

9. Written notification and photographs shall be submitted within 30 days of restoration demonstrating that all temporarily disturbed wetland areas have been restored in compliance with the permit conditions.

10. The DEQ TRO VWPP Program shall be notified in writing within **30 days** following the completion of activities authorized by this permit.

Compensation

11. The permittee shall submit a final wetland compensation plan, which includes (at a minimum): the goals and objectives of the plan, in terms of replacement of functions and values and expressed in acres of each wetland type; discussion of buffers; discussion of structures and features necessary for the success of the site; the schedule for compensation site construction; a location map, including latitude and longitude (to the nearest second) at the center of the site; a hydrologic analysis, including a water budget (non-tidal sites only) based on expected monthly inputs and outputs which will project water level elevations for a typical year, a dry year and a wet year; groundwater elevation data, if available, or the proposed location of groundwater monitoring wells to collect these data; wetland delineation confirmation and data sheets and maps for existing wetland areas on the proposed site(s); a grading plan; a planting scheme and schedule, including suggested plant species, zonation and acreage of each vegetation type proposed; a soil preparation and amendment plan addressing both topsoil and subsoil conditions; design of water control structures; site access plan; a monitoring plan, including proposed success criteria, monitoring goals, and the location of photo stations, monitoring wells, soil sampling points (as appropriate), and vegetation sampling points, and reference wetlands (if available); an abatement and control plan for undesirable plant species, including, at a minimum, the species listed on DCR's Invasive Alien Plant Species of Virginia list, and including procedures to notify DEQ of any undesirable plant

species occurrences, methods of removal, and successful control; and an erosion and sedimentation control plan.

12. The final wetland compensation plan shall include protection of surface waters in perpetuity. These areas shall be surveyed or platted within 120 days of final plan approval, and the survey or plat shall be recorded in accordance with the requirements of this section. The restrictions, protections, or preservations, or similar instrument shall state that no activity will be performed on the property in any area designated as a compensation area or non-impacted surface water, with the exception of maintenance or corrective action measures authorized by DEQ. Unless specifically authorized by DEQ through the issuance of a VWP individual permit, modification of this permit, or waiver thereof, this restriction applies to ditching, land clearing or the filling, dumping, excavating, draining, flooding, or impounding. Such instrument shall contain the specific phrase "ditching, land clearing or discharge of dredge or fill material" in the limitations placed on the use of these areas. The protective instrument shall be recorded in the chain of title to the property. Proof of recordation shall be submitted within 60 days of survey or plat approval. This requirement is to preserve the integrity of compensation areas and to ensure that additional impacts to surface waters do not occur.

13. A projected schedule of activities and projected construction completion date (including planting) for the compensation site shall be submitted to the DEQ TRO VWPP Program within 15 days of permit issuance.

14. All wetland compensation monitoring reports shall be submitted by November 30th of the monitoring year. The reports shall include, at a minimum, the following:

    a. A general description of the site including a site location map identifying photo stations, vegetative and soil monitoring stations, monitoring wells, and wetland zones.
    b. Summary of activities completed during the monitoring year.
    c. Description of monitoring methods.
    d. An analysis of all hydrology information, including monitoring well data, precipitation data, and gauging data from streams or other open water areas set forth in the final compensation plan;
    e. Evaluation of hydric soils or soils under hydric conditions;
    f. An analysis of all vegetative community information, including woody and herbaceous species, both planted and volunteers, set forth in the final compensation plan;
    g. Properly labeled photographs as described in Part I Section C.
    h. Discussion of wildlife or signs of wildlife observed at the compensation site;
    i. Comparison of site conditions from the previous monitoring year and/or reference site.
    j. Discussion of corrective measures or maintenance activities to control undesirable species, to repair any damaged water control device, or to replace any damaged planted vegetation.

15. Documentation of the total wetland acreage by wetland type based on the surveyed boundary shall be submitted within 30 days of the final monitoring event.

E. Road Crossings

1. Access roads shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations. Access roads constructed above pre-construction contours and elevations in surface waters shall be properly bridged or culverted to maintain surface flows.

2. At crossings of perennial streams, pipes and culverts shall be countersunk a minimum of six inches to provide for the re-establishment of a natural stream bottom and to maintain a low flow channel. For multiple-celled culverts, only those cells situated within the limits of ordinary high water shall be countersunk. Countersinking is not required for existing pipes or culverts that are being maintained or extended.

3. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.

4. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the construction of that particular crossing.

5. If stream channelization or relocation is required, all work in surface waters shall be done in the dry, unless authorized by this permit, and all flows shall be diverted around the channelization or relocation area until the new channel is stabilized. This work shall be accomplished by leaving a plug at the inlet and outlet ends of the new channel during excavation. Once the new channel has been stabilized, flow shall be routed into the new channel by first removing the downstream plug and then the upstream plug. The new stream channel shall be constructed following the typical sections submitted with the application. A low flow channel shall be constructed within the channelized or relocated area. The centerline of the low flow channel shall meander, to the extent possible, to mimic natural stream morphology. The rerouted stream flow shall be fully established before construction activities in the old streambed can begin.

6. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met.

F. Stormwater Management Facilities

1. Stormwater management facilities shall be designed in accordance with best management practices and watershed protection techniques, such as vegetated buffers, siting considerations to minimize adverse effects to aquatic resources, bioengineering methods incorporated into the facility design to benefit water quality and minimize adverse effects to aquatic resources (as per the Dept. of Conservation and Recreation's Stormwater

Management Handbook, Volumes 1 and 2, First Edition, 1999), that provide for long-term aquatic resources protection and enhancement, to the maximum extent practicable.

2. Final design calculations for the site stormwater management facilities shall be submitted to the DEQ prior to commencement of construction of the proposed site development. This submittal shall include confirmation from the local government that the facilities comply with local water quality and quantity treatment requirements as adopted from the Department of Conservation and Recreation.

3. The outfall and overflow structures shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site.

4. Maintenance excavation shall follow the approved maintenance plan authorized by this permit, and shall not exceed the original contours of the facility as constructed and approved by DEQ. A complete stormwater facility management plan shall be submitted to the DEQ for each stormwater management facility authorized by the permit. Maintenance excavation shall follow the approved maintenance plan, and shall not exceed the original contours of the facility as constructed.

5. Compensation for unavoidable wetland impacts shall not be allowed within maintenance areas of stormwater management facilities.

6. Maintenance within stormwater management facilities will not require compensation provided that the maintenance is accomplished in designated maintenance areas as indicated in the facility maintenance plan.

7. Draining of a pond shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

G. Compensation On Site and Off Site

General Compensation Requirements

1. The final compensation plan shall be approved by the DEQ TRO VWPP Program prior to any construction activity in permitted impact areas. The final compensation plan as approved by DEQ shall be an enforceable requirement of this permit. Any deviation from the approved plan must be submitted to and approved in advance of implementation by DEQ.
2. Compensation site construction (i.e. land disturbance) must be complete by November 30, 2003.
3. Planting of woody plants shall occur when vegetation is normally dormant unless otherwise approved in the final compensation plan.

4. Rooted seedlings or cuttings shall originate from a local nursery or be adapted to local conditions. Vegetation shall be native species common to the area, shall be suitable for growth in local wetland conditions, and shall be from areas within approximately 200 miles from the project site.

5. Undesirable plant species shall be identified and controlled as described in the abatement and control plan for undesirable plant species, such that they are not dominant species or do not change the desired community structure. The abatement and control plan shall include procedures to notify the DEQ TRO VWPP Program of any undesirable plant species occurrences, methods of removal, and successful control.

6. Herbicides or algaecides shall not be used in or immediately adjacent to the compensation site or sites without prior authorization from the DEQ TRO VWPP Program. All vegetation removal shall be done by manual means, unless authorized by the DEQ TRO VWPP Program in advance.

7. For compensation sites involving land disturbance, a site stabilization plan shall be submitted to the DEQ TRO VWPP Program at least 60 days prior to compensatory mitigation construction activities.

8. Point sources of stormwater runoff shall be prohibited from entering any compensation site prior to treatment by appropriate best management practices. Appropriate best management practices may include sediment traps, grassed waterways, vegetated filter strips, debris screens, oil and grease separators, and forebays.

9. If the compensation area fails to be established as per the specified performance criteria, the reasons for this failure shall be determined and a corrective action plan, schedule, and monitoring plan shall be submitted to the DEQ TRO VWPP Program for approval prior to or with the next required monitoring report. All problems shall be corrected by the permittee. Shall significant changes be necessary to ensure success, the monitoring plan shall begin again, with monitoring year one being the year changes are complete.

Wetland Compensation

10. The permittee shall compensate for the impacts to 0.64 acres of nontidal forested wetlands through the off-site restoration of 0.64 acres of nontidal forested wetlands and the on-site preservation of a combination of forested wetlands, and uplands containing the state endangered small whorled pogonia, at a 10:1 ratio, and upland buffer at a 15:1 ratio as proposed in the mitigation plan prepared by Williamsburg Environmental Group, Inc. entitled "Wetland Compensation Plan, Harrison Ruffin Property, Charles City County", dated April 21, 2003 and last revised on July 29, 2003. The on-site preservation areas are located within the proposed Windsormeade of Williamsburg development as depicted on the drawing prepared by Williamsburg Environmental Group, Inc. entitled "Selected Alternative Wetland Impacts Map, Windsormeade of

Williamsburg, James City County, Virginia" dated February 15, 2002 and last revised on July 30, 2003. The compensation sites shall be preserved in perpetuity.

11. Wetland hydrology shall be considered established if depths to the seasonal high water table are equal to or less than 12 inches below ground surface for at least 12.5% of the growing season, for 28 consecutive days, as defined in the United States Department of Agriculture soil survey for the locality of the compensation site in all monitoring years under normal rainfall conditions, as defined in the water budget of the final compensation plan.

12. The presence of hydric soils or soils under hydric conditions shall be evaluated in accordance with the final compensation plan.

13. The wetland plant community shall be considered established according to the performance criteria specified in the final compensation plan and approved by the DEQ TRO VWPP Program. Species composition shall reflect the desired plant community types stated in the final compensation plan by the end of the first growing season and shall be maintained through the last monitoring year. Species composition shall consist of greater than 50% facultative (FAC) or wetter (FACW or OBL) vegetation, as expressed by plant stem density or aerial cover.

14. A post-grading survey, including spot elevations, of the site shall be required and shall be conducted by a licensed land surveyor or a professional engineer. Post-grading elevations for the compensation site shall be sufficient to ensure that wetland hydrology will be achieved on the site to support the goals and objectives of the compensation plan.

15. Compensation site monitoring for hydrology, soils, and hydrophytic vegetation shall begin at the first complete growing season (monitoring year one) following compensation site construction. Monitoring shall be required for monitoring years 1, 2, 4, 7, and 10. If all success criteria have not been met in the final monitoring year, then monitoring shall be required for each consecutive year until two annual sequential reports indicate that all criteria have been successfully satisfied (i.e., that corrective actions were successful).

16. Photographs shall be taken at the compensation site from the permanent photo stations identified in the final compensation plan. At each station, four photographs shall be taken in the direction of the major compass points. These photographs shall be taken after the initial planting and in August or September every monitoring year. Photographs shall be appropriately labeled as described in Part I Section C.

17. The establishment of wetland hydrology shall be measured during the growing season, with the location and number of monitoring wells, and frequency of monitoring for each site, in accordance with the final compensation plan. All hydrology monitoring well data shall be accompanied by precipitation data, including rainfall amounts, either from on site, or from the closest weather station. Once the wetland hydrology success criteria have been satisfied for a particular monitoring year, monitoring may be discontinued for

the remainder of that monitoring year following DEQ TRO VWPP Program approval.

18. The establishment of wetland vegetation shall be in accordance with the final compensation plan. Monitoring shall take place in August or September during the growing season of each monitoring year, unless otherwise authorized in the monitoring plan.

19. During each monitoring event, the permittee shall document all wildlife or signs of wildlife observed at the site.

20. The wetland boundary for the compensation site shall be based on the results of the hydrology, soils, and vegetation monitoring data. Calculation of total wetland acreage by wetland type shall be based on that boundary at the end of the monitoring cycle and shall be shown on the site plan. Data shall be submitted within 30 days of the final monitoring event.

A. Duty to Comply

The permittee shall comply with all conditions of the VWP permit. Nothing in the VWP permit regulations shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations and prohibitions. Any VWP permit violation is a violation of the law, and is grounds for enforcement action, VWP permit termination, revocation, modification, or denial of an application for a VWP permit extension or reissuance.

B. Duty to Cease or Confine Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the permit which may have a reasonable likelihood of adversely affecting human health or the environment.

D. VWP Permit Action

1. A VWP permit may be modified, revoked and reissued, or terminated as set forth in 9 VAC 25-210 et seq.

2. If a permittee files a request for VWP permit modification, revocation, or termination, or files a notification of planned changes, or anticipated noncompliance, the VWP permit terms and conditions shall remain effective until the request is acted upon by the board. This provision shall not be used to extend the expiration date of the effective VWP permit. If the permittee wishes to continue an activity regulated by the VWP permit after the expiration date of the VWP permit, the permittee must apply for and obtain a new VWP permit or comply with the provisions of 9 VAC 25-210-185 (VWP Permit Extension).

3. VWP permits may be modified, revoked and reissued or terminated upon the request of the permittee or other person at the board's discretion, or upon board initiative to reflect the requirements of any changes in the statutes or regulations, or as a result of VWP permit noncompliance as indicated in the Duty to Comply subsection above, or for other reasons listed in 9 VAC 25-210-180 (Rules for Modification, Revocation and Reissuance, and Termination of VWP permits).

E. Inspection and Entry

Upon presentation of credentials, any duly authorized agent of the board may, at reasonable times and under reasonable circumstances:

1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;

2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit, and

3. Sample or monitor any substance, parameter or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

F. Duty to Provide Information

1. The permittee shall furnish to the board any information which the board may request to determine whether cause exists for modifying, revoking, reissuing or terminating the VWP permit, or to determine compliance with the VWP permit. The permittee shall also furnish to the board, upon request, copies of records required to be kept by the permittee.

2. Plans, specifications, maps, conceptual reports and other relevant information shall be submitted as required by the board prior to commencing construction.

G. Monitoring and Records Requirements

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2000), Guidelines Establishing Test Procedures for the Analysis of Pollutants.

2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to complete the application for the VWP permit, for a period of at least three years from the date of the expiration of a granted VWP permit. This period may be extended by request of the board at any time.

4. Records of monitoring information shall include:

   a. The date, exact place and time of sampling or measurements;

   b. The name of the individuals who performed the sampling or measurements;

   c. The date and time the analyses were performed;

   d. The name of the individuals who performed the analyses;

e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;

f. The results of such analyses; and

g. Chain of custody documentation.

H. Transferability

This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if:

1. The current permittee notifies the board within 30 days of the proposed transfer of the title to the facility or property;

2. The notice to the board includes a written agreement between the existing and proposed permittee containing a specific date of transfer of VWP permit responsibility, coverage and liability to the new permittee, or that the existing permittee will retain such responsibility, coverage, or liability, including liability for compliance with the requirements of any enforcement activities related to the permitted activity; and

3. The board does not within the 30-day time period notify the existing permittee and the new permittee of its intent to modify or revoke and reissue the VWP permit.

I. Property rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local law or regulation.

J. Reopener

Each VWP permit shall have a condition allowing the reopening of the VWP permit for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

K. Compliance with State and Federal Law

Compliance with this VWP permit constitutes compliance with the VWP permit requirements of the State Water Control Law. Nothing in this VWP permit shall be construed to preclude the institution of any legal action under or relieve the permittee from

any responsibilities, liabilities, or other penalties established pursuant to any other state law or regulation or under the authority preserved by § 510 of the Clean Water Act.

L. Severability

The provisions of this VWP permit are severable.

M. Permit Modification

A VWP permit may be modified, but not revoked and reissued except when the permittee agrees or requests, when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of VWP permit conditions that differ from those of the existing VWP permit or are absent from it;
2. When new information becomes available about the operation or activity covered by the VWP permit which was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;
3. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
4. When it becomes necessary to change final dates in schedules due to circumstances over which the permittee has little or no control such as acts of God, materials shortages, etc. However, in no case may a compliance schedule be modified to extend beyond any applicable statutory deadline of the Act;
5. When changes occur which are subject to "reopener clauses" in the VWP permit; or
6. When the board determines that minimum instream flow levels resulting from the permittee's withdrawal of water are detrimental to the instream beneficial use and the withdrawal of water should be subject to further net limitations or when an area is declared a Surface Water Management Area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.

N. Permit Termination

After notice and opportunity for a formal hearing pursuant to Procedural Rule No. 1 (9 VAC 25-230-100) a VWP permit can be terminated for cause. Causes for termination are as follows:

1. Noncompliance by the permittee with any condition of the VWP permit;
2. The permittee's failure in the application or during the VWP permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;

3. The permittee's violation of a special or judicial order;

4. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and

6. A determination that the permitted activity has ceased and that the compensatory mitigation for unavoidable adverse impacts has been successfully completed.

O. Civil and Criminal Liability

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Unauthorized Discharge of Pollutants

Except in compliance with this VWP permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances;

2. Excavate in a wetland;

3. Otherwise alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, to animal or aquatic life, to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses.

4. On or after October 1, 2001 conduct the following activities in a wetland:

   a. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;

   b. Filling or dumping;

   c. Permanent flooding or impounding;

d. New activities that cause significant alteration or degradation of existing wetland acreage or functions.

R. Permit Extension

1. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit, shall submit written notification request if an extension. The permittee must file the request prior to the expiration date of the VWP permit. Under no circumstances will the extension be granted for more than 15 years beyond the original effective date of the VWP permit. If the request for extension if denied, the VWP permit will still expire on its original date and, therefore, care should be taken to allow for sufficient time for the board to evaluate the extension request and to process a full VWP permit modification, if required.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
www.deq.state.va.us

Robert G. Burnley
Director

Francis L. Daniel
Tidewater Regional Director
(757) 518-2000

September 25, 2003

Mr. Wm. Jeryl Fink
Virginia United Methodist Homes
c/o Ms. Shelley Carlisle
Williamsburg Environmental Group, Inc.
3000 Easter Circle
Williamsburg, Virginia 23188

RE: Final VWP Individual Permit
Virginia Water Protection Individual Permit Number 02-0454
New Town Development - Windsormeade Way

Dear Mr. Fink:

Pursuant to the Virginia Water Protection (VWP) Permit Program Regulation 9 VAC 25-210-10 and § 401 of the Clean Water Act Amendments of 1977, Public Law 95-217, the Department of Environmental Quality (DEQ) has enclosed the original VWP individual permit for the above-referenced project involving fill for a main entrance road into the New Town master planned development.

The provisions and conditions contained therein according to § 401(a)(1) of the Clean Water Act requires that:

> "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge in the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of this Act."

This permit is valid for twelve years from the date of issuance. Re-issuance of the permit may be necessary if any portion of the authorized activities or any permit requirement have not been completed. The permit term, including any extensions, cannot exceed the maximum of 15 years.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have **30 calendar days** from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

Alternatively, any owner under §§62.1-44.16, 62.1-44.17 and 62.1-44.19 of the State Water Control Law aggrieved by any action of the board taken without a formal hearing, or by inaction of the board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the board. Said petition must meet the requirements set forth in §1.23(b) of the board's Procedural Rule Number 1 (9 VAC 25-230-10 et seq. of the Virginia Administrative Code). In cases involving actions of the board, such petition must be filed within **30 calendar days** after notice of such action is mailed to such owner by certified mail.

If you have any questions, please feel free to contact Sheri Kattan at 757-518-2156 or sakattan@deq.state.va.us.

Sincerely,

Harold J. Winer
Regional Deputy Director

Enclosures: Permit Cover Page, Part I - Special Conditions, Part II - General Conditions

cc: Steve Martin, U.S. Army Corps of Engineers
VWP permit file

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
www.deq.state.va.us

Robert G. Burnley
Director

Francis L. Daniel
Tidewater Regional Director
(757) 518-2000

VWP Individual Permit Number 02-0454
Effective Date: September 25, 2003
Expiration Date: September 24, 2015

VIRGINIA WATER PROTECTION PERMIT
ISSUED PURSUANT TO THE STATE WATER CONTROL LAW
AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner and in compliance with § 401 of the Clean Water Act as amended (33 USC 1251 et seq.) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The board finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment to state waters or fish and wildlife resources.

Permittee: Virginia United Methodist Homes

Address: 7113 Three Chopt Road
Richmond, Virginia 23226
Attn: Mr. Wm. Jeryl Fink

Activity Location: Along the north side of Monticello Avenue approximately 1000 feet west of Route 199 in James City County, Virginia.

Activity Description: The permittee proposes construction of an entrance road to the proposed Windsormeade of Williamsburg development and to other developments associated with the New Town Development master plan.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions and Part II - General Conditions.

_____(for)
Director, Department of Environmental Quality

9/25/03
Date

A. Authorized Activities

1. This permit authorizes impacts via fill to 0.82 acres of nontidal forested wetlands and 0.07 acres (154 linear feet) of intermittent stream for construction of an entrance road to the Windsormeade of Williamsburg development and other developments planned within the New Town development master plan, as indicated in the Joint Permit Application dated March 1, 2002 and revised on March 25, 2003; site plans prepared by Williamsburg Environmental Group, Inc. and entitled, "Jurisdictional Area Impacts Map, Windsormeade Way" dated March 13, 2003; correspondence from Williamsburg Environmental Group, Inc. dated April 7, 2003 and July 9, 2003, and master plan prepared by AES Consulting Engineers entitled "New Town Plan" dated December 2, 1997.

2. The project activities, including any conditions and limitations, described in the Joint Permit Application and any supplemental materials submitted by the applicant, or authorized agent, shall be adhered to for the term of this permit.

3. The permittee shall notify the Department of Environmental Quality Tidewater Regional Office Virginia Water Protection Permit (DEQ TRO VWPP) Program of any additional impacts to surface waters, including wetlands or any change to the type of wetland impacts, associated with this project. Any additional impacts to surface waters, including wetlands, or any change to the type of wetland impacts, shall be subject to individual permit review or modification of this permit, and compensation may be required.

4. This permit is valid for 12 years from the date of issuance. Reissuance of the permit may be necessary if any portion of the authorized activities or any permit requirement has not been completed. The original permit term and extension cannot exceed the maximum of 15 years.

B. Standard Project Conditions

1. The activities authorized by this permit shall be executed in a manner to minimize any adverse impact on stream beneficial uses, as defined in § 62.1-10(b) of the Code.

2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species that normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams shall be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. The activity shall not impede the passage of normal or expected high flows and the structure or discharge shall withstand expected high flows. Flows downstream of the project area shall be maintained to protect all uses.

culvert

maintain downstream flow

3. The permittee shall conduct activities in accordance with the time-of-year (TOY) restrictions as recommended by the Department of Game and Inland Fisheries or as required by the Virginia Marine Resources Commission. The permittee shall maintain a copy of such TOY restriction or notification that no restriction is necessary, for the duration of the construction phase of the project.

4. All excavation, dredging, and/or filling in surface waters shall be accomplished in a manner that minimizes stream bottom disturbances and turbidity increases.

5. All non-impacted surface waters and required upland buffers within the project or right-of-way limits that are within fifty feet of any project activities shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that these marked areas are areas where no activities are to occur.

6. Virginia Water Quality Standards shall not be violated in any surface water as a result of the project activities.

7. Temporary disturbances to wetlands during construction shall be avoided and minimized to the maximum extent practicable. All temporarily disturbed wetland areas shall be stabilized within 30 days of completing work in each respective impact area, restored to pre-construction conditions, and planted or seeded with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested). The permittee shall take all appropriate measures to promote revegetation of temporarily disturbed wetland areas with wetland vegetation by the second year post-disturbance. All temporary fills shall be removed in their entirety and the affected area returned to pre-existing contours.

8. Heavy equipment in temporarily impacted surface waters shall be placed on mats, geotextile fabric, or other suitable measures to minimize soil disturbance to the maximum extent practicable. Mats shall be removed as soon as the work is complete.

9. All materials (including fill, construction debris, and excavated and woody materials) temporarily stockpiled in wetlands shall be placed on mats or geotextile fabric, immediately stabilized to prevent entry into surface waters, managed such that leachate does not enter surface waters, and entirely removed within 30 days following completion of that construction activity. Disturbed areas shall be returned to original contours, stabilized within 30 days following removal of the stockpile, and restored to the original vegetated state.

10. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls shall be placed prior to clearing and grading and maintained in good working order to minimize impacts to surface waters. These controls shall remain in place until the area stabilizes.

11. Any exposed slopes or streambanks shall be stabilized immediately upon completion of work in each impact area in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.

12. The permittee shall employ measures to prevent spills of fuels, lubricants, or other pollutants into surface waters.

13. All construction, construction access (for example, cofferdams, sheetpiling, and causeways) and demolition activities associated with this project shall be accomplished in a manner that minimizes construction or waste materials from entering surface waters to the maximum extent practicable, unless authorized by this permit.

14. All fill material shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.

15. Wet or uncured concrete shall be prohibited from entry into surface waters.

16. No machinery may enter surface waters, unless authorized by this permit.

17. In issuing this permit, DEQ has not taken into consideration the structural stability of any proposed structure.

C. Construction Monitoring

1. A photo station shall be established at each impact site authorized by this permit. The photograph orientation at these stations shall remain constant during all monitoring events. The photographs shall document site activities and conditions, which should include installation and maintenance of erosion and sediment controls, flagged non-impact surface waters and required upland buffers, filling and excavation activities, pipe/culvert installation, and site stabilization activities. Photographs shall be taken prior to site activities, at the end of each month, and within one week of construction completion. Monthly photographs at each impact site shall not be required until construction activities are initiated at that site. Monthly photographs at each impact site shall not be required following completion of construction at that impact site and site stabilization. Each photograph shall be labeled to include the following information: permit number, impact area and photo station number, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.

D. Required Notifications and Submittals

1. All written communications required by this permit shall be submitted to the DEQ TRO VWPP Program. Please include the permit number on all correspondence.

2. All reports required by this permit and other information requested by the DEQ TRO VWPP Program shall be signed by the applicant or a person acting in the applicant's behalf, with the authority to bind the applicant. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

   c. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization shall be submitted to DEQ prior to or together with any separate information, or applications to be signed by an authorized representative.

3. All submittals required by this permit shall contain the following signed certification statement:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

4. Any fish kills or spills of fuels or oils shall be reported immediately upon discovery. If spills or fish kills occur between the hours of 8:15 AM to 5:00 PM Monday through Friday, DEQ TRO shall be notified at 757-518-2077; otherwise, the Department of Emergency Services shall be notified at 1-800-468-8892.

5. Violations of Virginia Water Quality Standards shall be reported within 24 hours to DEQ TRO at 757-518-2077.

6. DEQ shall be notified in writing when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

Construction

7. The DEQ TRO VWPP Program shall be notified in writing at least **ten days** prior to the start of activities authorized by this permit so that inspections of the project can be

planned, if deemed necessary. The notification shall include a projected schedule for completing work at the permitted impact area.

8. Construction monitoring reports shall be submitted to the DEQ TRO VWPP Program within **30 days** of each monitoring event. The reports shall include, as appropriate, the following:

   a. A written narrative stating whether work was performed, a description of the work performed at each impact area, when the work was initiated, and expected date of completion; a summary of activities conducted to comply with the permit conditions; a summary of permit non-compliance events or problems encountered, subsequent notifications, and corrective actions; a summary of anticipated work to be completed during the next reporting period; and an estimated date of project completion.

   b. A labeled site map depicting all impact areas and photo stations.

   c. Properly labeled photographs as described in Part I Section C.

9. Written notification and photographs shall be submitted within 30 days of restoration demonstrating that all temporarily disturbed wetland areas have been restored in compliance with the permit conditions.

10. The DEQ TRO VWPP Program shall be notified in writing within **30 days** following the completion of activities authorized by this permit.

Compensation

11. The permittee shall submit a final wetland compensation plan, which includes (at a minimum): the goals and objectives of the plan, in terms of replacement of functions and values and expressed in acres of each wetland type; discussion of buffers; discussion of structures and features necessary for the success of the site; the schedule for compensation site construction; a location map, including latitude and longitude (to the nearest second) at the center of the site; a hydrologic analysis, including a water budget (non-tidal sites only) based on expected monthly inputs and outputs which will project water level elevations for a typical year, a dry year and a wet year; groundwater elevation data, if available, or the proposed location of groundwater monitoring wells to collect these data; wetland delineation confirmation and data sheets and maps for existing wetland areas on the proposed site(s); a grading plan; a planting scheme and schedule, including suggested plant species, zonation and acreage of each vegetation type proposed; a soil preparation and amendment plan addressing both topsoil and subsoil conditions; design of water control structures; site access plan; a monitoring plan, including proposed success criteria, monitoring goals, and the location of photo stations, monitoring wells, soil sampling points (as appropriate), and vegetation sampling points, and reference wetlands (if available); an abatement and control plan for undesirable plant species, including, at a minimum, the species listed on DCR's Invasive Alien Plant Species of Virginia list, and including procedures to notify DEQ of any undesirable plant

species occurrences, methods of removal, and successful control; and an erosion and sedimentation control plan.

12. The final wetland compensation plan shall include protection of surface waters in perpetuity. These areas shall be surveyed or platted within 120 days of final plan approval, and the survey or plat shall be recorded in accordance with the requirements of this section. The restrictions, protections, or preservations, or similar instrument shall state that no activity will be performed on the property in any area designated as a compensation area or non-impacted surface water, with the exception of maintenance or corrective action measures authorized by DEQ. Unless specifically authorized by DEQ through the issuance of a VWP individual permit, modification of this permit, or waiver thereof, this restriction applies to ditching, land clearing or the filling, dumping, excavating, draining, flooding, or impounding. Such instrument shall contain the specific phrase "ditching, land clearing or discharge of dredge or fill material" in the limitations placed on the use of these areas. The protective instrument shall be recorded in the chain of title to the property. Proof of recordation shall be submitted within 60 days of survey or plat approval. This requirement is to preserve the integrity of compensation areas and to ensure that additional impacts to surface waters do not occur.

13. A projected schedule of activities and projected construction completion date (including planting) for the compensation site shall be submitted to the DEQ TRO VWPP Program within 15 days of permit issuance.

14. All wetland compensation monitoring reports shall be submitted by November 30th of the monitoring year. The reports shall include, at a minimum, the following:

    a. A general description of the site including a site location map identifying photo stations, vegetative and soil monitoring stations, monitoring wells, and wetland zones.
    b. Summary of activities completed during the monitoring year.
    c. Description of monitoring methods.
    d. An analysis of all hydrology information, including monitoring well data, precipitation data, and gauging data from streams or other open water areas set forth in the final compensation plan;
    e. Evaluation of hydric soils or soils under hydric conditions;
    f. An analysis of all vegetative community information, including woody and herbaceous species, both planted and volunteers, set forth in the final compensation plan;
    g. Properly labeled photographs as described in Part I Section C.
    h. Discussion of wildlife or signs of wildlife observed at the compensation site;
    i. Comparison of site conditions from the previous monitoring year and/or reference site.
    j. Discussion of corrective measures or maintenance activities to control undesirable species, to repair any damaged water control device, or to replace any damaged planted vegetation.

15. Documentation of the total wetland acreage by wetland type based on the surveyed boundary shall be submitted within 30 days of the final monitoring event.

E. Road Crossings

1. Access roads shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations. Access roads constructed above pre-construction contours and elevations in surface waters shall be properly bridged or culverted to maintain surface flows.

2. At crossings of perennial streams, pipes and culverts shall be countersunk a minimum of six inches to provide for the re-establishment of a natural stream bottom and to maintain a low flow channel. For multiple-celled culverts, only those cells situated within the limits of ordinary high water shall be countersunk. Countersinking is not required for existing pipes or culverts that are being maintained or extended.

3. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.

4. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the construction of that particular crossing.

5. If stream channelization or relocation is required, all work in surface waters shall be done in the dry, unless authorized by this permit, and all flows shall be diverted around the channelization or relocation area until the new channel is stabilized. This work shall be accomplished by leaving a plug at the inlet and outlet ends of the new channel during excavation. Once the new channel has been stabilized, flow shall be routed into the new channel by first removing the downstream plug and then the upstream plug. The new stream channel shall be constructed following the typical sections submitted with the application. A low flow channel shall be constructed within the channelized or relocated area. The centerline of the low flow channel shall meander, to the extent possible, to mimic natural stream morphology. The rerouted stream flow shall be fully established before construction activities in the old streambed can begin.

6. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met.

F. Compensation On Site and Off Site

General Compensation Requirements

1. The final compensation plan shall be approved by the DEQ TRO VWPP Program prior to any construction activity in permitted impact areas. The final compensation plan as approved by DEQ shall be an enforceable requirement of this permit. Any

deviation from the approved plan must be submitted to and approved in advance of implementation by DEQ.

2. Compensation site construction (i.e. land disturbance) must be complete by November 30, 2003.

3. Planting of woody plants shall occur when vegetation is normally dormant unless otherwise approved in the final compensation plan.

4. Rooted seedlings or cuttings shall originate from a local nursery or be adapted to local conditions. Vegetation shall be native species common to the area, shall be suitable for growth in local wetland conditions, and shall be from areas within approximately 200 miles from the project site.

5. Undesirable plant species shall be identified and controlled as described in the abatement and control plan for undesirable plant species, such that they are not dominant species or do not change the desired community structure. The abatement and control plan shall include procedures to notify the DEQ TRO VWPP Program of any undesirable plant species occurrences, methods of removal, and successful control.

6. Herbicides or algaecides shall not be used in or immediately adjacent to the compensation site or sites without prior authorization from the DEQ TRO VWPP Program. All vegetation removal shall be done by manual means, unless authorized by the DEQ TRO VWPP Program in advance.

7. For compensation sites involving land disturbance, a site stabilization plan shall be submitted to the DEQ TRO VWPP Program at least 60 days prior to compensatory mitigation construction activities.

8. Point sources of stormwater runoff shall be prohibited from entering any compensation site prior to treatment by appropriate best management practices. Appropriate best management practices may include sediment traps, grassed waterways, vegetated filter strips, debris screens, oil and grease separators, and forebays.

9. If the compensation area fails to be established as per the specified performance criteria, the reasons for this failure shall be determined and a corrective action plan, schedule, and monitoring plan shall be submitted to the DEQ TRO VWPP Program for approval prior to or with the next required monitoring report. All problems shall be corrected by the permittee. Shall significant changes be necessary to ensure success, the monitoring plan shall begin again, with monitoring year one being the year changes are complete.

Wetland Compensation

10. The permittee shall compensate for the impacts to 0.82 acres of nontidal forested wetlands and 0.07 acres of intermittent stream through the off-site restoration of 0.82 acres of nontidal forested wetlands and the on-site preservation of a combination of forested wetlands, and uplands containing the state endangered small whorled pogonia, at

a 10:1 ratio, and upland buffer at a 15:1 ratio as proposed in the mitigation plan prepared by Williamsburg Environmental Group, Inc. entitled "Wetland Compensation Plan, Harrison Ruffin Property, Charles City County", dated April 21, 2003 and last revised on July 29, 2003. The on-site preservation areas are located within the proposed Windsormeade of Williamsburg development as depicted on the drawing prepared by Williamsburg Environmental Group, Inc. entitled "Selected Alternative Wetland Impacts Map, Windsormeade of Williamsburg" dated February 15, 2002 and last revised on July 30, 2003. The compensation sites shall be preserved in perpetuity.

11. Wetland hydrology shall be considered established if depths to the seasonal high water table are equal to or less than 12 inches below ground surface for at least 12.5% of the growing season, for 28 consecutive days, as defined in the United States Department of Agriculture soil survey for the locality of the compensation site in all monitoring years under normal rainfall conditions, as defined in the water budget of the final compensation plan.

12. The presence of hydric soils or soils under hydric conditions shall be evaluated in accordance with the final compensation plan.

13. The wetland plant community shall be considered established according to the performance criteria specified in the final compensation plan and approved by the DEQ TRO VWPP Program. Species composition shall reflect the desired plant community types stated in the final compensation plan by the end of the first growing season and shall be maintained through the last monitoring year. Species composition shall consist of greater than 50% facultative (FAC) or wetter (FACW or OBL) vegetation, as expressed by plant stem density or aerial cover.

14. A post-grading survey, including spot elevations, of the site shall be required and shall be conducted by a licensed land surveyor or a professional engineer. Post-grading elevations for the compensation site shall be sufficient to ensure that wetland hydrology will be achieved on the site to support the goals and objectives of the compensation plan.

15. Compensation site monitoring for hydrology, soils, and hydrophytic vegetation shall begin at the first complete growing season (monitoring year one) following compensation site construction. Monitoring shall be required for monitoring years 1, 2, 4, 7, and 10. If all success criteria have not been met in the final monitoring year, then monitoring shall be required for each consecutive year until two annual sequential reports indicate that all criteria have been successfully satisfied (i.e., that corrective actions were successful).

16. Photographs shall be taken at the compensation site from the permanent photo stations identified in the final compensation plan. At each station, four photographs shall be taken in the direction of the major compass points. These photographs shall be taken after the initial planting and in August or September every monitoring year. Photographs shall be appropriately labeled as described in Part I Section C.

17. The establishment of wetland hydrology shall be measured during the growing season, with the location and number of monitoring wells, and frequency of monitoring for each site, in accordance with the final compensation plan. All hydrology monitoring well data shall be accompanied by precipitation data, including rainfall amounts, either from on site, or from the closest weather station. Once the wetland hydrology success criteria have been satisfied for a particular monitoring year, monitoring may be discontinued for the remainder of that monitoring year following DEQ TRO VWPP Program approval.

18. The establishment of wetland vegetation shall be in accordance with the final compensation plan. Monitoring shall take place in August or September during the growing season of each monitoring year, unless otherwise authorized in the monitoring plan.

19. During each monitoring event, the permittee shall document all wildlife or signs of wildlife observed at the site.

20. The wetland boundary for the compensation site shall be based on the results of the hydrology, soils, and vegetation monitoring data. Calculation of total wetland acreage by wetland type shall be based on that boundary at the end of the monitoring cycle and shall be shown on the site plan. Data shall be submitted within 30 days of the final monitoring event.

A. Duty to Comply

The permittee shall comply with all conditions of the VWP permit. Nothing in the VWP permit regulations shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations and prohibitions. Any VWP permit violation is a violation of the law, and is grounds for enforcement action, VWP permit termination, revocation, modification, or denial of an application for a VWP permit extension or reissuance.

B. Duty to Cease or Confine Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the permit which may have a reasonable likelihood of adversely affecting human health or the environment.

D. VWP Permit Action

1. A VWP permit may be modified, revoked and reissued, or terminated as set forth in 9 VAC 25-210 et seq.

2. If a permittee files a request for VWP permit modification, revocation, or termination, or files a notification of planned changes, or anticipated noncompliance, the VWP permit terms and conditions shall remain effective until the request is acted upon by the board. This provision shall not be used to extend the expiration date of the effective VWP permit. If the permittee wishes to continue an activity regulated by the VWP permit after the expiration date of the VWP permit, the permittee must apply for and obtain a new VWP permit or comply with the provisions of 9 VAC 25-210-185 (VWP Permit Extension).

3. VWP permits may be modified, revoked and reissued or terminated upon the request of the permittee or other person at the board's discretion, or upon board initiative to reflect the requirements of any changes in the statutes or regulations, or as a result of VWP permit noncompliance as indicated in the Duty to Comply subsection above, or for other reasons listed in 9 VAC 25-210-180 (Rules for Modification, Revocation and Reissuance, and Termination of VWP permits).

E. Inspection and Entry

Upon presentation of credentials, any duly authorized agent of the board may, at reasonable times and under reasonable circumstances:

1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;

2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit, and

3. Sample or monitor any substance, parameter or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

F. Duty to Provide Information

1. The permittee shall furnish to the board any information which the board may request to determine whether cause exists for modifying, revoking, reissuing or terminating the VWP permit, or to determine compliance with the VWP permit. The permittee shall also furnish to the board, upon request, copies of records required to be kept by the permittee.

2. Plans, specifications, maps, conceptual reports and other relevant information shall be submitted as required by the board prior to commencing construction.

G. Monitoring and Records Requirements

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2000), Guidelines Establishing Test Procedures for the Analysis of Pollutants.

2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to complete the application for the VWP permit, for a period of at least three years from the date of the expiration of a granted VWP permit. This period may be extended by request of the board at any time.

4. Records of monitoring information shall include:

   a. The date, exact place and time of sampling or measurements;

   b. The name of the individuals who performed the sampling or measurements;

   c. The date and time the analyses were performed;

   d. The name of the individuals who performed the analyses;

e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;

f. The results of such analyses; and

g. Chain of custody documentation.

H. Transferability

This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if:

1. The current permittee notifies the board within 30 days of the proposed transfer of the title to the facility or property;

2. The notice to the board includes a written agreement between the existing and proposed permittee containing a specific date of transfer of VWP permit responsibility, coverage and liability to the new permittee, or that the existing permittee will retain such responsibility, coverage, or liability, including liability for compliance with the requirements of any enforcement activities related to the permitted activity; and

3. The board does not within the 30-day time period notify the existing permittee and the new permittee of its intent to modify or revoke and reissue the VWP permit.

I. Property rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local law or regulation.

J. Reopener

Each VWP permit shall have a condition allowing the reopening of the VWP permit for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

K. Compliance with State and Federal Law

Compliance with this VWP permit constitutes compliance with the VWP permit requirements of the State Water Control Law. Nothing in this VWP permit shall be construed to preclude the institution of any legal action under or relieve the permittee from

any responsibilities, liabilities, or other penalties established pursuant to any other state law or regulation or under the authority preserved by § 510 of the Clean Water Act.

L. Severability

The provisions of this VWP permit are severable.

M. Permit Modification

A VWP permit may be modified, but not revoked and reissued except when the permittee agrees or requests, when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of VWP permit conditions that differ from those of the existing VWP permit or are absent from it;
2. When new information becomes available about the operation or activity covered by the VWP permit which was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;
3. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
4. When it becomes necessary to change final dates in schedules due to circumstances over which the permittee has little or no control such as acts of God, materials shortages, etc. However, in no case may a compliance schedule be modified to extend beyond any applicable statutory deadline of the Act;
5. When changes occur which are subject to "reopener clauses" in the VWP permit; or
6. When the board determines that minimum instream flow levels resulting from the permittee's withdrawal of water are detrimental to the instream beneficial use and the withdrawal of water should be subject to further net limitations or when an area is declared a Surface Water Management Area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.

N. Permit Termination

After notice and opportunity for a formal hearing pursuant to Procedural Rule No. 1 (9 VAC 25-230-100) a VWP permit can be terminated for cause. Causes for termination are as follows:

1. Noncompliance by the permittee with any condition of the VWP permit;
2. The permittee's failure in the application or during the VWP permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
3. The permittee's violation of a special or judicial order;

4. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and

6. A determination that the permitted activity has ceased and that the compensatory mitigation for unavoidable adverse impacts has been successfully completed.

O. Civil and Criminal Liability

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Unauthorized Discharge of Pollutants

Except in compliance with this VWP permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances;

2. Excavate in a wetland;

3. Otherwise alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, to animal or aquatic life, to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses.

4. On or after October 1, 2001 conduct the following activities in a wetland:

   a. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;

   b. Filling or dumping;

   c. Permanent flooding or impounding;

d. New activities that cause significant alteration or degradation of existing wetland acreage or functions.

R. Permit Extension

1. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit, shall submit written notification request if an extension. The permittee must file the request prior to the expiration date of the VWP permit. Under no circumstances will the extension be granted for more than 15 years beyond the original effective date of the VWP permit. If the request for extension if denied, the VWP permit will still expire on its original date and, therefore, care should be taken to allow for sufficient time for the board to evaluate the extension request and to process a full VWP permit modification, if required.

James City County, Virginia
Environmental Division

Erosion and Sediment Control and Stormwater Management Design Plan Checklists

Table of Contents

Contents

GENERAL INFORMATION

Project Name: WindsorMeade Villa Entrance + Sewer Plan
Owner / Applicant: VA United Methodist Homes
Plan Preparer: JASON GRIMES Email: jgrimes@aesva.com
Project Location: WindsorMeade Way off Monticello Ave.
Tax Map / Parcel: (38-3)(1-34A)
County Plan No. (if known): SP-5-04
County BMP Type: Ex. Detention Dry Pond (F-2)
Other information submitted in addition to this checklist (Check all that apply):

- ☐ Design or Construction Drawings (Plans, Profiles, Details, etc.).
- ☐ Erosion & Sediment Control Plan (Plans, Details, etc.).
- ☐ Erosion & Sediment Control Plan Design Report.
- ☐ Stormwater Management Design Plan (Plans, Profiles, Details, etc.).
- ☐ Stormwater Management Design Report.
- ☐ Other, List: _____

Issue Date
March 1, 2001

JAMES CITY COUNTY, VIRGINIA
ENVIRONMENTAL DIVISION

EROSION AND SEDIMENT CONTROL PLAN CHECKLIST

I. *GENERAL:*

Yes	No	N/A	
☒	☐	☐	*FAMILIARITY* with current versions of Chapter 8, Erosion and Sedimentation Control and Chapter 23, Chesapeake Bay Preservation ordinances of the Code of James City County, Virginia and the Virginia Erosion and Sediment Control Handbook (VESCH).
☒	☐	☐	*LAND DISTURBING PERMIT AND SILTATION AGREEMENT* with surety are required for the project.
☐	☒	☐	*VARIANCE* if necessary, requested in writing, for the plan approving authority to waive or modify any of the minimum standards and specifications of the VESCH deemed inappropriate based on site conditions specific to this review case only. Variances which are approved shall be properly documented in the plan and become part of the approved erosion and sediment control plan for the site.

II. *SITE PLAN:*

Yes	No	N/A	
☒	☐	☐	*VICINITY MAP* locating the site in relation to the surrounding area. Include any major landmarks which might assist in physically locating the site.
☒	☐	☐	*INDICATE NORTH* direction in relation to the site.
☒	☐	☐	*LIMITS OF CLEARING AND GRADING* for the site including that required for implementation of erosion and sediment controls, stockpile areas and utilities.
☒	☐	☐	*DISTURBED AREA ESTIMATES* in acres or square feet for the project.
☒	☐	☐	*EXISTING TOPOGRAPHY* or contours for the site at no more than 5 foot contour interval.
☒	☐	☐	*FINAL TOPOGRAPHY*, contours or proposed site grading in accordance with the design plan which indicates changes to existing topography and drainage patterns at no more than 2 foot contour interval (or 1 foot contours where required).
☒	☐	☐	*EXISTING AND PROPOSED SPOT ELEVATIONS* to supplement existing and proposed contours, topography or site grading information. Spot elevations may replace final contours in some instances, especially if terrain is in a low lying area or relatively flat.
☒	☐	☐	*EXISTING VEGETATION* including existing tree lines, grassed or unique vegetation areas.

Yes	No	N/A	
☒	☐	☐	*EXISTING SITE FEATURES* including roads, buildings, homes, utilities, streams, fences, structures and other important surface features of the site.
☒	☐	☐	*SOILS MAP* with soil symbols, boundaries and legend in accordance with the current Soil Survey of James City and York Counties and the City of Williamsburg, Virginia.
☒	☐	☐	*ENVIRONMENTAL INVENTORY* in accordance with Section 23-10(2) of the Chesapeake Bay Preservation Ordinance of James City County. Inventory generally includes: tidal shores and wetlands, non-tidal wetlands, resource protection area, hydric soils and slopes steeper than 25 percent. For wetlands, provide a copy of issued permits or satisfactory evidence that appropriate permits are being pursued for the entire project.
☐	☐	☒	*100-YEAR FLOODPLAIN LIMITS* or any special flood hazard areas or flood zones based on appropriate Federal Management Agency Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps (FHBMs) of James City County, Virginia.
☒	☐	☐	*DRAINAGE AREAS* for offsite and onsite areas, existing or proposed as applicable. Include drainage divides and directional labels for all subareas at points of interest and size (in acres), weighted runoff coefficient or curve number and times of concentration for each subarea.
☒	☐	☐	*CRITICAL EROSION AREAS* which require special consideration or unique erosion and sediment control measures. Refer to the VESCH, Chapter 6 for criteria.
☒	☐	☐	*DEVELOPMENT PLAN* for the site showing all improvements such as buildings, structures, parking areas, access roadways, above and below ground utilities, stormwater management and drainage facilities, trails or sidewalks, proposed vegetation and landscaping, amenities, etc.
☒	☐	☐	*LOCATION OF PRACTICES* proposed for erosion and sediment control, tree protection and temporary stormwater management due to land disturbance activities at the site. Use standard abbreviations, labels and symbols consistent for plan views based on minimum standards and specifications in Chapter 3 of the VESCH.
☒	☐	☐	*TEMPORARY STOCKPILE AREAS* or staging and equipment storage areas as required for onsite or offsite construction activities or indicate that none are anticipated for this project.
☐	☐	☒	*OFFSITE LAND DISTURBING AREAS* including borrow sites, waste areas, utility extensions, etc. and required erosion and sediment controls. If none are anticipated for the project, then indicate on the plans by general or erosion and sediment control notes.
☒	☐	☐	*DETAILS* or alternately, appropriate reference to current minimum standards and specifications of the VESCH for each measure proposed for the project. Non-modified, standard duplicated details (silt fence, diversion dikes, etc.) may be referenced to the current version of the VESCH. Specific dimensional or modified standards (basins, traps, outlet protections, check dams, etc.) require presentation on detail sheets. Schedules or tables may be used for multiple site measures such as sediment traps, basins, channels, slope drains, etc. Any modification to standard details should be clearly defined, explained and illustrated.

Yes	No	N/A	
☒	☐	☐	*MAINTENANCE PLAN* or alternately, appropriate reference to current minimum standards and specifications of the VESCH, outlining the inspection frequency and maintenance requirements for all erosion and sediment control measures proposed for the project.
☐	☐	☒	*TRENCH DEWATERING* methods and erosion and sediment controls, if anticipated for the project.
☒	☐	☐	*CONSTRUCTION SEQUENCE* outlining the anticipated sequence for installation of erosion and sediment controls and site, grading and utility work to be performed for the project by the site contractor.
☐	☐	☒	*PHASING PLAN* if required for larger project sites that are to be developed in stages or phases.
☒	☐	☐	*STANDARD COUNTY NOTES* are required to be placed on the erosion and sediment control plan. Refer to the standard James City County Erosion and Sediment Control Notes dated May 5, 1999.
☒	☐	☐	*PROFESSIONAL SEAL AND SIGNATURE* required on final and complete approved plans, drawings, technical reports and specifications.

III. *NARRATIVE:*

Yes	No	N/A	
☒	☐	☐	*PROJECT DESCRIPTION* briefly describing the nature and purpose of the land disturbing activity and the acreage to be disturbed.
☒	☐	☐	*EXISTING SITE CONDITIONS* description of existing topography, land use, cover and drainage patterns at the site.
☒	☐	☐	*ADJACENT AREA* descriptions of neighboring onsite or offsite areas such as streams, lakes, property, roads, etc. and potential impacts due to concentrated flow or runoff from the land disturbing activity.
☒	☐	☐	*OFFSITE DISTURBED AREA* descriptions of proposed borrow sites, waste or surplus areas, utility extensions and erosion and sediment controls to be implemented.
☒	☐	☐	*SOILS DESCRIPTION* briefly summarizing site, disturbed area and drainage basin soils including name, unit, hydrologic soil group (HSG) classification, surface runoff potential, erodibility, permeability, depth, texture, structure, erosion hazards, shrink-swell potential, limitations for use and anticipated depths to bedrock and the seasonal water table, as applicable.
☒	☐	☐	*CRITICAL AREAS* on the site which many have potentially serious erosion and sediment control problems and special considerations required (ie. steep slopes, hydric soils, channels, springs, sinkholes, water supply reservoirs, groundwater recharge areas, etc.)

Yes No N/A

☒ ☐ ☐ *PROPOSED EROSION & SEDIMENT CONTROL MEASURES* inclusive to the specific erosion and sediment control plan as proposed for the land disturbing activity. Measures should be consistent with those proposed on the site drawings. Address general use, installation, limitations, sequencing and maintenance requirements for each control measure.

☒ ☐ ☐ *STABILIZATION MEASURES* required for the site, either temporary or permanent, and during and following construction including temporary and permanent seeding and mulching, paving, stone, soil stabilization blankets and matting, sodding, landscaping or special stabilization techniques to be utilized at the site.

☒ ☐ ☐ *STORMWATER MANAGEMENT CONSIDERATIONS* for the site, either of temporary or permanent nature, and strategies, sequences and measures required for control. May reference the stormwater management plan for the site, if prepared, for permanent stormwater management facilities and control of drainage once the site is stabilized.

IV. *CALCULATIONS:*

Yes No N/A

☒ ☐ ☐ *CALCULATIONS AND COMPUTATIONS* associated with hydrology, hydraulics and design of proposed temporary and permanent erosion and sediment control measures including: sediment traps and basins, diversions, stormwater conveyance channels, culverts, slope drains, outlet protections, etc. Computations are not required on the construction plan and may be attached in a supplemental erosion and sediment control plan design report, if presented in a clear and organized format.

☒ ☐ ☐ *TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET* submitted for each basin along with schematic or sketch cross-section showing applicable design and construction data, storage volumes (wet-dry), dimensions and elevations. Peak design runoff to be based on the 2- or 25-year design storm event based on maximum disturbed site conditions (existing, interim or proposed conditions) in accordance with Minimum Standard 3.14 of the VESCH.

JAMES CITY COUNTY, VIRGINIA
ENVIRONMENTAL DIVISION

STORMWATER MANAGEMENT DESIGN PLAN CHECKLIST

I. *GENERAL:*

Yes	No	N/A	
☒	☐	☐	*FAMILIARITY* with current versions of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual; Chapter 8, Erosion and Sediment Control and Chapter 23, Chesapeake Bay Preservation ordinances of the Code of James City County, Virginia; the Virginia Erosion and Sediment Control Handbook (VESCH); and the Virginia Stormwater Management Handbook (VSMH).
☐	☐	☒	*WAIVER OR EXCEPTION* if necessary, requested in writing, for the plan approving authority to waive or except the requirements of Chapter 23, Chesapeake Bay Preservation ordinance in accordance with procedure established in Sections 23-14 through 23-17 of the ordinance. Applies to this review case only.
☐	☐	☒	*VARIANCE REQUEST* if necessary, requested in writing for the plan approving authority to waive or modify any of the minimum standards and specifications of the VESCH deemed inappropriate based on site conditions specific to this review case only. Variances which are approved shall be properly documented in the plan and become part of the approved erosion and sediment control plan for the site.
☒	☐	☐	*PROFESSIONAL SEAL AND SIGNATURE* required on final and complete approved stormwater management plans, drawings, technical reports and specifications.
☒	☐	☐	*WORKSHEET FOR BMP POINT SYSTEM* to ensure the stormwater management plan for the project attains at least 10 BMP points (New Development) or traditional pollutant load reduction computations per the Chesapeake Bay Local Assistance Manual (Redevelopment Only).
☐	☐	☒	*PROPOSED CONSERVATION EASEMENT AREAS* for any natural open space points claimed in the BMP worksheet.
☒	☐	☐	*INSPECTION/MAINTENANCE AGREEMENT* is required to be prepared and executed with the County for the project.
☒	☐	☐	*FEMA FIRM PANEL* reference with designated special flood hazard areas or zone designations associated with the site, as applicable.
☒	☐	☐	*DRAINAGE AREA MAP* at a maximum scale of 1"=200' scale showing drainage area boundaries for pre- and postdevelopment conditions and associated time of concentration flow paths. Labels to include drainage area size, runoff coefficient or curve number and time of concentration for each subarea shown on the map.

Yes No N/A

☒ ☐ ☐ *SOILS MAP* with soil symbols, boundaries and legend in accordance with the current Soil Survey of James City and York Counties and the City of Williamsburg, Virginia with approximate locations of the project site, BMPs and applicable drainage basins.

☒ ☐ ☐ *STORMWATER MANAGEMENT NARRATIVE* in a brief and simple format which describes the project; location; site and drainage basin soil characteristics; receiving water or drainage facility; existing site and drainage basin conditions (topography, land use, cover, slopes, etc.); proposed site development; proposed stormwater management and drainage plan including County BMP type selected; summary of hydrology and hydraulics; maintenance program; and any special assumptions utilized for development of the stormwater management and drainage design plan or computations.

☒ ☐ ☐ *TEMPORARY STORMWATER MANAGEMENT* (if applicable) for control of stormwater runoff encountered during construction activities in addition to measures provided in the erosion and sediment control plan or stormwater management/drainage plan for the site. Adequate protection measures or sequencing provided.

☒ ☐ ☐ *MODIFICATION PLAN* clearly defined for temporary sediment control structures which will be converted to permanent SWM/BMP structures. Includes appropriate hydrologic and hydraulic computations, conversions, sequencing and cleanout information or details. Normally related to primary control structures associated with dry detention or wet retention ponds. Normally not permitted for Group C or D categories such as bioretention, infiltration and filtering system facilities.

☒ ☐ ☐ *STORMWATER MANAGEMENT and DRAINAGE DESIGN REPORT* in a bound 8-1/2 x 11 inch size format. Report shall generally include a title sheet, date, project identification, owner and preparer information, table of contents, narrative, summaries and computations as required. Computations may include: backwater, closed conduit, headwater, hydraulic, hydraulic grade line, hydrology, inlet, open channel, storm sewer, water quality, extended detention or stream channel protection and muti-stage storm routing calculations, as applicable, for the project. Computation data may include hand or computer generated computations, maps or schematics. All information should be presented in a clear, easy to follow format and should closely match construction plan information.

☒ ☐ ☐ *PLAN VIEW* at 1 inch = 50 ft. scale or less (1" = 40', 1" = 30', etc.)

- ☐ ☐ ☐ North arrow and plan legend.
- ☐ ☐ ☐ Property lines.
- ☐ ☐ ☐ Adjacent property information.
- ☐ ☐ ☐ Existing site features and existing impervious cover areas.
- ☐ ☐ ☐ Impervious cover tabulations.
- ☐ ☐ ☐ Existing drainage facilities (natural or manmade).
- ☐ ☐ ☐ Existing environmentally sensitive areas (RPA, wetlands, floodplain, steep slopes, critical soils, buffers, etc.).
- ☐ ☐ ☐ Existing and proposed contours (1' or 2' contour interval) and spot elevations as necessary to define high and low topography.
- ☐ ☐ ☐ Existing and proposed easement locations.

Yes	No	N/A	
☐	☐	☐	Proposed site improvements and proposed impervious cover areas.
☐	☐	☐	Proposed stormwater conveyance, drainage and management facilities with appropriate labeled construction data and information.
☐	☐	☐	Proposed landscaping and seeding plans (disturbed areas, pond interior, etc.).
☐	☐	☐	Proposed slope stabilization areas (riprap, blankets, mattings, walls, etc.).
☐	☐	☐	Delineation of permanent pools and the 1-, 2-, 10- and 100-year Design Water Surface Elevations.
☐	☐	☐	Delineation of ponding, headwater, surcharge or backwater areas which may affect adjacent existing or proposed buildings, structures or upstream adjacent properties.
☐	☐	☐	Test boring locations with reference surface elevations (if known).
☐	☐	☐	Risers, barrels, underdrains, overflows and outlet protections.
☐	☐	☐	Emergency spillway level section and outlet channel.
☐	☐	☐	Existing and proposed site utilities and protection measures.
☐	☐	☐	Erosion and sediment control measures (for site or BMP).
☐	☐	☐	Maintenance or access corridors to permanent stormwater management, BMP or drainage facilities.

II. *STORMWATER CONVEYANCE SYSTEMS:*

Yes	No	N/A	
☒	☐	☐	*PLAN VIEWS*
☐	☐	☐	Storm drain lengths, sizes, types, classes and slopes for all segments. Label directly on plan or use structure/pipe schedule.
☐	☐	☐	Access structure (inlets, manholes, junctions, etc.) rim elevations, inverts, type and required grate or top unit and lengths labeled.
☐	☐	☐	All structure numbers labeled.
☐	☐	☐	Adequate horizontal clearance from other site utilities or structures.
☒	☐	☐	*PROFILES* generally are not required but are encouraged to expedite review. If not provided, ensure all pipe segments have adequate minimum cover, do not exceed maximum depths of cover for the type/class of pipe specified and do not conflict with other site utilities or excavation areas.
☒	☐	☐	*DETAILS*
☐	☐	☐	Typical storm drain bedding details or reference note.
☐	☐	☐	Standard details or reference note for all proposed access structure types (inlets, manholes, junctions, etc.).
☐	☐	☐	Inlet shaping detail or applicable reference note.
☐	☐	☐	Step detail or applicable reference note (if depth 4 ft. or more).
☐	☐	☐	Typical open channel details with designation, location, shape, type, bottom width, top width, lining, slope, length, side slope, and installation depth required for construction. Channel design data as necessary may also be included.
☐	☐	☐	Outlet protections at all pipe outfalls.

Yes No N/A

☒ ☐ ☐ *STORMWATER CONVEYANCE SYSTEM COMPUTATIONS*

- ☐ ☐ ☐ Storm Sewer Design computations based on 10-year design event.
- ☐ ☐ ☐ Hydraulic Grade Line computations based on 10-year design event.
- ☐ ☐ ☐ Inlet computations based on current VDOT procedure for spread, ponding depth and grate size required.
- ☐ ☐ ☐ Culvert Headwater computations. Design based on 10-year design storm event and check only for 100-year storm event.
- ☐ ☐ ☐ Open Channel computations based on 2-year design event for velocity and 10-year design event for capacity.
- ☐ ☐ ☐ Standard outlet protection or special energy dissipators.
- ☐ ☐ ☐ Pipe thickness design computations, as required, for selected pipe type (live load, minimum cover, maximum height of cover, etc.).
- ☐ ☐ ☐ Adequate channel computations for receiving channels (based on field measured channel section data).

III. *STORMWATER MANAGEMENT / BMP FACILITIES*:

Yes No N/A

☒ ☐ ☐ *HYDROLOGY* - An SCS based methodology is required for the design of stormwater management/BMP facilities with watersheds exceeding 20 acres. Under 20 acres, other generally accepted methodologies such as the modified rational, critical storm are allowable. Refer to Chapter 5 of the VESCH or Chapter 5 of the VSMH.

- ☐ ☐ ☐ Runoff Curve Number or Coefficient determinations: predeveloped and ultimate development land use scenarios.
- ☐ ☐ ☐ Time of concentration: predeveloped and ultimate development indicating overland, shallow concentrated, and channel flow components (200 ft. maximum length for overland flow).
- ☐ ☐ ☐ Hydrograph generation (tabular or graphical): pre- and postdevelopment conditions for the 1-, 2-, 10-, and 100-year design storm events.

☒ ☐ ☐ *FACILITY CONFIGURATION and MINIMUM SEPARATIONS*

- ☐ ☐ ☐ Screening and layout consistent with Section 24-98(d) of the Chapter 24 Zoning ordinance (landscaping, screening, visibility, etc.).
- ☐ ☐ ☐ Basic considerations for safety and unauthorized entry.
- ☐ ☐ ☐ Proper length to width ratio (Typically 2H:1V).
- ☐ ☐ ☐ Facilities with deep pools (4 feet or more in depth) provided with two benches. Fifteen (15) ft. safety bench outward from normal pool at maximum 6 percent slope and aquatic bench inward from normal shoreline below normal pool. Narrower widths may be considered on a case-by-case basis.
- ☐ ☐ ☐ Pond buffer minimum 25 feet outward from maximum design WSEL. Additional setbacks may be required to permanent structures.
- ☐ ☐ ☐ No trees, shrubs or woody plants within 15 feet of embankment toe or 25 feet from principal spillway structure.

Yes No N/A

☐ ☐ ☐ Infiltration and filtering system facilities generally located at least 100 feet horizontally from any water supply well; 100 feet from any downslope building; and 25 feet from any upslope buildings, unless site specific investigation allows for reduced separation.

Yes No N/A

☒ ☐ ☐ *HYDRAULIC COMPUTATIONS*

- ☐ ☐ ☐ Elevation- or Stage- Storage curve and/or tabular data.
- ☐ ☐ ☐ Weir / Orifice Control - Extended Detention.
- ☐ ☐ ☐ Weir / Orifice Control - riser 1-year control for channel protection.
- ☐ ☐ ☐ Weir / Orifice Control - riser 2-year control for quantity (if required).
- ☐ ☐ ☐ Weir / Orifice Control - riser 10-year control for quantity (if required).
- ☐ ☐ ☐ Inlet / Outlet (barrel) control - (All Storms).
- ☐ ☐ ☐ Check for barrel control prior to riser orifice flow to prevent slug flow-water hammer conditions.
- ☐ ☐ ☐ Emergency spillway capacity and depth of flow.
- ☐ ☐ ☐ Elevation - Discharge (Outlet Rating) curve and/or table. Provide all supporting calculations and/or design assumptions.
- ☐ ☐ ☐ Adequate channel computations for receiving channel. May be waived if facility is designed based on current Stream Channel Protection criteria.

☒ ☐ ☐ *POND or RESERVOIR ROUTING*

- ☐ ☐ ☐ Storage-Indication Routing of postdeveloped inflow hydrographs for the 1-, 2-, 10-, and 100-year design storms. Preference is for structure to discharge up to the 10-year storm through the principal spillway and pass the 100-year storm with a minimum 1 foot of freeboard through a combination principal and emergency spillways. If no emergency spillway is provided, riser must be large enough to pass the design high water flow and trash without overtopping the facility, have 3 square feet or more of cross-sectional area, contain a hood type inlet and have a minimum freeboard of 2 feet. Token spillways with minimum 8 ft. width are also recommended at or above the design 100-year storm elevation.
- ☐ ☐ ☐ Downstream hydrographs at established study points, if conditions warrant (ie. facility discharge combined with uncontrolled bypass).

☒ ☐ ☐ *MISCELLANEOUS COMPUTATIONS*

- ☐ ☐ ☐ Water quality volume for permanent pool based on selected BMP treatment volume (WQv).
- ☐ ☐ ☐ Water quality volume for extended detention based on selected BMP treatment volume (WQv) with drawdown computations.
- ☐ ☐ ☐ Drawdown computations for the 1-year, 24 hour detention for stream channel protection criteria.
- ☐ ☐ ☐ Pond drain computations (within 24 hours).
- ☐ ☐ ☐ Anti-seep collar design (concrete preferred) or match material type.
- ☐ ☐ ☐ Filter diaphragm design (or alternative method of controlling seepage).

Yes No N/A

- ☐ ☐ ☐ Riser / base structure flotation analyses. FS = 1.25 minimum.
- ☐ ☐ ☐ Downstream danger reach study and/or emergency action plan (if conditions warrant).
- ☐ ☐ ☐ Upstream backwater analyses onto offsite adjacent property (if conditions warrant).
- ☐ ☐ ☐ 100 year floodplain impacts (if conditions warrant).

Yes No N/A

☒ ☐ ☐ *GEOTECHNICAL REQUIREMENTS*

- ☐ ☐ ☐ Geotechnical Report with recommendations specific to BMP facility type selected. Report prepared by a registered professional engineer. Requires submission, review and approval prior to issuance of Land Disturbance Permit.
- ☐ ☐ ☐ Initial Feasibility Testing requirements satisfied as per Appendix E of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual. (Infiltration, Bioretention and Filtering System BMP types only).
- ☐ ☐ ☐ Concept Design Testing requirements satisfied as per Appendix E of the James City County Guidelines for Design and Construction of Stormwater Management BMPs manual. (Infiltration, Bioretention and Filtering System BMP types only).
- ☐ ☐ ☐ Minimum Boring locations: borrow area, pool area, principal control structure, top of facility near one abutment and emergency spillway if provided.
- ☐ ☐ ☐ Boring logs with Unified Soil Classification (ASTM D2487), soils descriptions and depths to bedrock and the seasonal water table indicated.
- ☐ ☐ ☐ Standard County Record Drawing/Construction Certification note provided on plan. *Note: It is understood that preparation of record drawings and construction certifications as required for project facilities may not necessarily be performed by the plan preparer. These components may be performed by others.*

☒ ☐ ☐ *PRINCIPAL SPILLWAY PROFILE AND ASSOCIATED DETAILS*

☒ ☐ ☐ *EXISTING GROUND AND PROPOSED GRADE*

- ☐ ☐ ☐ Embankment or excavation side slopes labeled (3H:1V maximum).
- ☐ ☐ ☐ Minimum top width labeled (per VESCH or VSMH requirements).
- ☐ ☐ ☐ Removal of unsuitable material under proposed facility (per Geotechnical Report requirements).

Yes No N/A

☒ ☐ ☐ *CORE TRENCH*

- ☐ ☐ ☐ Material (per plan or Geotechnical Report).
- ☐ ☐ ☐ Bottom width (4' minimum or greater as dictated by Geotechnical Report recommendations).
- ☐ ☐ ☐ Side slopes (1:1 maximum steepness)
- ☐ ☐ ☐ Depth (4' minimum or greater as dictated by Geotechnical Report).

☒ ☐ ☐ *PRINCIPAL CONTROL STRUCTURE. RISER OR SIMILAR STRUCTURE (DETAILS REQUIRED FOR ALL ITEMS)*

- ☐ ☐ ☐ Durable, watertight, resistant material (concrete preferred).
- ☐ ☐ ☐ Riser diameter is at least 1.25 times larger than barrel diameter.
- ☐ ☐ ☐ All pertinent dimensions and elevations shown.
- ☐ ☐ ☐ Control orifice or weir dimensions and elevations shown.
- ☐ ☐ ☐ Trash rack - removable - for each release.
- ☐ ☐ ☐ Anti-vortex device, baffle or plate.
- ☐ ☐ ☐ Riser base structure with dimensions and embedment specifications (concrete preferred).
- ☐ ☐ ☐ Interior access (steps, ladders, etc.) for maintenance for structures over 4 feet in height. Excessively high risers may need some form of exterior access on top portion.
- ☐ ☐ ☐ Low flow orifice with trash rack device.

☒ ☐ ☐ *PRINCIPAL CONTROL STRUCTURE OUTLET BARREL*

- ☐ ☐ ☐ Material (ASTM C-361 reinforced concrete pipe) with watertight joints. Prior approval required for all other pipe material (other RCP types, CMP, CPP, PVC, etc.).
- ☐ ☐ ☐ Support and bedding requirements for barrel - concrete cradles, etc. or as recommended by the Geotechnical Report.
- ☐ ☐ ☐ Pipe inverts, length, size, class and slope shown.
- ☐ ☐ ☐ Flared end section or endwall provided on barrel outlet.

☒ ☐ ☐ *SEEPAGE CONTROL*

- ☐ ☐ ☐ Phreatic line shown (4:1 slope measured from the intersection of the embankment and the principal spillway design high water).

- ☐ ☐ ☐ *ANTI-SEEP COLLARS*
  - ☐ ☐ ☐ Anti-seep collar, concrete preferred.
  - ☐ ☐ ☐ Size - 15 percent increase in length of saturation using outside pipe diameter.
  - ☐ ☐ ☐ Spacing and location on barrel (located at least 2 feet from a pipe joint).

☐ ☐ ☐ *FILTER DIAPHRAGMS*

☐ ☐ ☐ Design based on latest NRCS design methods and certified by a professional engineer.

Yes No N/A

☒ ☐ ☐ *ELEVATION AND DIMENSIONAL DESIGN DATA*

- ☐ ☐ ☐ Top of facility - construction height and settled height (10 percent settlement).
- ☐ ☐ ☐ Crest of principal control structure spillway at least one (1) foot below crest of emergency spillway, if provided.
- ☐ ☐ ☐ Minimum freeboard of one (1) foot above the 100-year design high water elevation for facilities <u>with</u> an emergency spillway.
- ☐ ☐ ☐ Minimum freeboard of two (2) feet above the 100-year design high water elevation for facilities <u>without</u> an emergency spillway or in accordance with the SCS National Engineering Handbook (prior approval required).
- ☐ ☐ ☐ Basin Sediment Clean-Out elevation (permanent mode). Typically 10 to 25 percent of water quality volume.

☒ ☐ ☐ *CROSS SECTION THROUGH FACILITY*

- ☐ ☐ ☐ Existing Ground.
- ☐ ☐ ☐ Proposed grade.
- ☐ ☐ ☐ Top of facility - constructed and settled.
- ☐ ☐ ☐ Location of emergency spillway with side slopes labeled (emergency spillway in cut).
- ☐ ☐ ☐ Bottom of core trench (4' minimum).
- ☐ ☐ ☐ Location of each soil boring.
- ☐ ☐ ☐ Barrel location.
- ☐ ☐ ☐ Existing and proposed utility location/protection.

☒ ☐ ☐ *EMERGENCY SPILLWAY PROFILE*

- ☐ ☐ ☐ Existing ground.
- ☐ ☐ ☐ Inlet, level (control) and outlet sections per SCS.
- ☐ ☐ ☐ Spillway and crest elevations.

☒ ☒ ☐ *PRETREATMENT DEVICES* of adequate depth and properly designed using required pretreatment volumes for the selected County BMP facility type. Including, but not limited to: sediment forebays, sediment basins, sumps, grass channels, gravel diaphragms, plunge pools, chamber separators, manufactured systems or other acceptable methods.

Yes	No	N/A	
☒	☐	☐	*CONSTRUCTION SPECIFICATIONS and NOTES*
☐	☐	☐	Anticipated sequence of construction for BMP (consistent with erosion and sediment control plan).
☐	☐	☐	Provisions to control base stream or storm flow conditions encountered during construction.
☐	☐	☐	Site and subgrade preparation requirements.
☐	☐	☐	Embankment, fill and backfill material soil and placement (lift) thickness requirements.
☐	☐	☐	Compaction and soil moisture content requirements.
☐	☐	☐	Geosynthetics for drainage, filtration, moisture barrier, separation, and reinforcement purposes.
☐	☐	☐	Clay or synthetic (PVC or HDPE) pond liners.
☐	☐	☐	Storm drain, underdrain and pipe conduit requirements.
☐	☐	☐	Minimum depth of pipe cover for temporary (construction) and final cover conditions.
☐	☐	☐	Permanent shutoff valve and pond drain.
☐	☐	☐	Concrete requirements for structural components.
☐	☐	☐	Riprap and slope protection.
☐	☐	☐	Access or maintenance road surface, base, subbase.
☐	☐	☐	Temporary and permanent stabilization measures.
☐	☐	☐	Temporary or permanent safety fencing.
☐	☐	☐	BMP Landscaping (deep, shallow, fringe, perimeter,etc.)
☐	☐	☐	Dust and traffic control (if warranted).
☐	☐	☐	Construction monitoring and certification by professional.
☐	☐	☐	Other: _____
☐	☐	☐	Other: _____.
☒	☐	☐	*MAINTENANCE PROVISIONS*
☐	☐	☐	Entity responsible for maintenance identified..
☐	☐	☐	Maintenance Plan which outlines the long-term schedule for inspection/maintenance of the facility and forebays
☐	☐	☐	Maintenance access from public right-of-way or publicly traveled road.
☐	☐	☐	Maintenance easement provided encompassing high water pool and buffer, principal and emergency spillways, outlet structures, forebays, embankment area and possible sediment-removal stockpile areas.
☐	☐	☐	Minimum 6 foot wide public safety shelf (landing) or alternative fencing.

IV. ***OUTLET PROTECTIONS:***

Yes	No	N/A	
☑	☐	☐	Sized for maximum design release (generally 10-year storm).
☒	☐	☐	Flared end section or endwall.
☒	☐	☐	Dimensions.
☒	☐	☐	Rock or riprap size, quantity and placement thickness.
☒	☐	☐	Slope at 0 percent (Level Grade).
☒	☐	☐	Geotextiles (nonwoven).
☐	☑	☐	Special energy dissipators are required for design discharge velocities that exceed eighteen (18) feet per second; or if use of standard outlet protection would result in velocities exceeding permissible channel velocities; or if space restricts or limits their use.

V. ***ADDITIONAL COMMENTS OR INFORMATION SPECIFIC TO THE PLAN:***

Plan Preparer: _____

Date: 3/19/04

James City County Environmental Division Stormwater Management/BMP Record Drawing and Construction Certification Review Tracking Form

Project Name: Villa Entrance BMP
County Plan No.: SP-05-04
Stormwater Management Facility: Wet Pond
BMP Phase #: ☐ I ☐ II ☐ III

- [x] Information Package Received. Date/By: 12/16/08 Wes Bacon
- [x] Completeness Check:
  - [x] Record Drawing — Date/By: 12/16/08 Mark Bennett
  - [x] Construction Certification — Date/By: 12/15/08 Michael Galli
  - [x] RD/CC Standard Forms (Required for all BMPs after Feb 1st 2001Only)
  - [x] Insp/Maint Agreement # / Date: #050008925 2/23/2005
  - [x] BMP Maintenance Plan Location: Sheet 8
  - [ ] Other:
- [x] Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review
  - [x] Yes ☐ No — Location: Sheet 9 Item 20
- [x] Assign **County BMP ID Code #**: Code: PC238
- [x] Preliminary Input/Log into Division's "As-Built Tracking Log"
- [x] Add Location to GIS Map. Obtain basic site information (GPIN, Owner, Address, etc.)
- [x] Preliminary Log into Access Database (BMP ID #, Plan No., GPIN, Project Name, etc.)
- [ ] Active Project File Review (correspondence, H&H, design computations, etc.).
- [ ] Initial As-Built File setup (File label, folder, copy plan/details/design information, etc.).
- [x] Inspector Check of RD/CC (forward to Inspector using transmittal for cursory review).
- [x] Pre-Inspection Drawing Review of Approved Plan (Quick look prior to Field Inspection).
- [x] Final Inspection (FI) Performed — Date: 2/3/10
- [x] Record Drawing (RD) Review — Date: 2/3/10
- [x] Construction Certification (CC) Review — Date: 2/3/10
- [x] Actions:
  - [ ] No comments.
  - [ ] Comments. Letter Forwarded. Date: —
  - [ ] Record Drawing (RD)
  - [ ] Construction Certification (CC)
  - [x] Construction-Related (CR)
  - [ ] Site Issues (SI)
  - [ ] Other :
- [ ] Second Submission: NA
- [x] Reinspection (if necessary): ALL CONSTRUCTION RELATED ISSUES CORRECTED
- [x] Acceptable for SWM Purposes (RD/CC/CR/Other). Ok to proceed with bond release.
- [x] Complete "Surety Request Form".
- [ ] Check/Clean active file of any remaining material and finish "As-Built" file.
- [x] Add to County BMP Inventory/Inspection schedule (Phase I, II or III).
- [ ] Copy Final Inspection Report into County BMP Inspection Program file.
- [ ] Obtain Digital Photographs of BMP and save into County BMP Inventory.
- [ ] Request mylar/reproducible from As-Built plan preparer.
- [ ] Complete "As-built Tracking Log".
- [ ] Last check of BMP Access Database (County BMP Inventory).
- [ ] Add BMP to JCC Hydrology & Hydraulic database (optional).
- [ ] Add BMP to Municipal BMP list (if a County-owned facility)
- [ ] Add BMP to PRIDE BMP ratings database.

Final Sign-Off

Inspector: [signature] Date: 2/16/10

Chief Engineer: _____ Date: _____

*** See separate checklist, if needed.

James City County Environmental Division
Stormwater Management / BMP Inspection Report
Detention and Retention Pond Facilities

County BMP ID Code (if known): PC 238

Name of Facility: Windsor Meade Villas Entrance BMP No.: 1 of 1 Date: April 7, 2009

Location: Windsor Meade - past guard shacks

Name of Owner: Methodist Homes of Virginia

Name of Inspector: Gregory B. Johnson

Type of Facility: Retention Pond

Weather Conditions: Warm/Sunny Type: ☒ Final Inspection ☐ County BMP Inspection Program ☐ Owner Inspection

If an inspection item is not applicable, mark NA, otherwise mark the appropriate column.

O.K. - The item checked is in adequate condition and the maintenance program is currently satisfactory. No action required.
Routine - The item checked requires attention, but does not present an immediate threat to the function/integrity of the BMP.
Urgent - The item checked requires immediate attention to keep the BMP operational and to prevent damage to the facility.

Provide an explanation and details in the comment column, if routine or urgent are marked.

Facility Item	O.K.	Routine	Urgent	Comments
Embankments and Side Slopes:				
Grass Height		✓		Needs Mowing
Vegetation Condition	✓			
Tree Growth	✓			
Erosion				
Trash & Debris		✓		Remove trash from inside
Seepage	✓			
Fencing or Benches	✓			
Interior Landscaping/Planted Areas: ☐ None ☐ Constructed Wetland/Shallow Marsh ☐ Naturally Established Vegetation				
Vegetated Conditions	✓			
Trash & Debris		✓		Remove trash and debris
Floating Material	-			
Erosion	✓			
Sediment	✓			
Dead Plant	✓			Non observed
Aesthetics	✓			
Other				
Notes:				

Facility Item	O.K.	Routine	Urgent	Comments
Water Pools: ❒ Permanent Pool (Retention Basin) ❒ Shallow Marsh (Detention Basin) ❒ None, Dry (Detention Basin)				
Shoreline Erosion				
Algae				
Trash & Debris				
Sediment				
Aesthetics				
Other				
Inflows (Describe Types/Locations):				
Condition of Structure		✓		Rip rap needs to be below flare lip
Erosion				
Trash and Debris				
Sediment		✓		Sediment needs to be removed
Outlet Protection		✓		Remove rip rap
Other		✓		Riprap stillin basin not on Approved plan
Principal Flow Control Structure - Riser, Intake, etc. (Describe Type):				
Condition of Structure				
Corrosion				
Trash and Debris				
Sediment				
Vegetation				
Other				
Principal Outlet Structure - Barrel, Conduit, etc. :				
Condition of Structure				
Settlement				
Trash & Debris				
Erosion/Sediment		✓		Top of slope
Outlet Protection		✓		Rip rap needs to be placed below lip
Other		✓		Debris needs to be cleared from channel
Emergency Spillway (Overflow):				
Vegetation	✓			
Lining	✓			
Erosion		✓		Erosion occuring at lower edge
Trash & Debris	✓			
Other		✓		
Notes: Positive flow channel not installed, Interior lip needs brought to grade				

Facility Item	O.K.	Routine	Urgent	Comments
Nuisance Type Conditions:				
Mosquito Breeding	✓			
Animal Burrows	✓			
Graffiti	✓			
Other	✓			
Surrounding Perimeter Conditions:				
Land Uses	✓			
Vegetation		✓		Weeds to be removed from channels
Trash & Debris		✓		
Aesthetics	✓			
Access /Maintenance Roads or Paths	✓			
Other				

Remarks:

Overall Environmental Division Internal Rating: ___ _____

Signature: _____ **Date:** 4/2/2009

Title: Inspector

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James City County, Virginia
Environmental Division

Stormwater Management / BMP Facilities
Record Drawing and Construction Certification Forms

(Note: In accordance with the requirements of the Chesapeake Bay Preservation Ordinance, Chapter 23, Section 23-10(4), BMP's shall be designed and constructed in accordance with the manual entitled James City County Guidelines for Design and Construction of Stormwater Management BMP's. Erosion and sediment control policy and approved plans generally require that at the completion of the project and prior to release of surety, an "as-built" plan prepared by a registered Professional Engineer or Certified Land Surveyor must be provided for the drainage system for the project, including any Best Management Practice (BMP) facilities. In addition, for BMP facilities involving the construction of an impounding structure or dam embankment, certification is required by a Professional Engineer who has inspected the structure during its construction. Currently there are over 20 water quality type BMP's accepted by the County.)

Section 1 – Site Information:

Project Name: Villa Entrance & Sewer Construction Plan Windsor Meade of Williamsburg
Structure/BMP Name: Villa Entrance BMP
Project Location: 3975 Windsormeade Way Williamsburg , VA 23188
BMP Location: By the guard shed, off of Windsormeade Way
County Plan No.: SP - 05 - 04

Project Type:
- ☒ Residential
- ☐ Commercial
- ☐ Institutional
- ☐ Public
- ☒ Other Retirement Community
- ☐ Business
- ☐ Office
- ☐ Industrial
- ☐ Roadway

Tax Map/Parcel No.: (38-3)(1-34A)
BMP ID Code (if known): FC 235
Zoning District: MU (Mixed Use)
Land Use: Single Family - Suburban
Site Area (sf or acres): 105.93 acres

Brief Description of Stormwater Management/BMP Facility: Villa Entrance BMP is an Detention Dry Pond (Type F-2). This BMP is has a drainage area of 2.08 acres, mainly roadway drainage.

Nearest Visible Landmark to SWM/BMP Facility: Guard shed and roadway intersection.

Nearest Vertical Ground Control (if known):
☒ JCC Geodetic Ground Control ☐ USGS ☐ Temporary ☐ Arbitrary ☐ Other
Station Number or Name: #325
Datum or Reference Elevation: NAD-83
Control Description: Vertical NGVD 1929, VA State Plane Coordinates-South Zone (NAD83)(1986)
Control Location from Subject Facility: Control is located at Berkeley Elementary School.

Section 2 – Stormwater Management / BMP Facility Construction Information:

PreConstruction Meeting Held for Construction of SWM/BMP Facility: ☒ Yes ☐ No ☐ Unknown
Approx. Construction Start Date for SWM/BMP Facility: Aug-2008
Facility Monitored by County Representative during Construction: ☒ Yes ☐ No ☐ Unknown
Name of Site Work Contractor Who Constructed Facility: C.A. Barrs Contractors, Inc.
Name of Professional Firm Who Routinely Monitored Construction: ECS Mid-Atlantic, LLC.
Date of Completion for SWM/BMP Facility: Oct-2008
Date of Record Drawing/Construction Certification Submittal: Sept-2008

(Note: Record Drawing and Construction Certifications are required within thirty (30) days of the completion of Stormwater Management and/or BMP facility construction. Record Drawings and Construction Certifications must be reviewed and approved by the James City County Environmental Division prior to final inspection, acceptance and bond or surety release.)

Section 3 – Owner / Designer / Contractor Information:

Owner/Developer: *(Note: Site Owner or Applicant responsible for development of the project.)*

Name: Virginia United Methodist Homes, Inc.
Mailing Address: 4704 Shotley Way
Williamsburg, VA 23188
Business Phone: (757) 565-6200 Fax:(757) 941-3611
Contact Person: Richard Bottone Title:Executive Director

Design Professional: *(Note: Professional Engineer or Certified Land Surveyor responsible for the design and preparation of plans and specifications for the Stormwater Management / BMP facility.)*

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Road, Suite 1
Williamsburg, VA 23188
Business Phone: (757) 253-0040
Fax: (757) 220-8994
Responsible Plan Preparer: V. Marc Bennett, PE
Title: Senior Project Manager
Plan Name: Villa Entrance & Sewer Construction Plan Windsor Meade of Williamsburg
Firm's Project No. 8818-04
Plan Date: 05/12/2004
Sheet No.'s Applicable to SWM/BMP Facility: SH 1 / SH 7 / SH 8 / _____ / _____

BMP Contractor: *(Note: Site Work Contractor directly responsible for construction of the Stormwater Management / BMP facility.)*

Name: C.A. Barrs Contractors, Inc.
Mailing Address: P.O. Box 1489
Yorktown, VA 23692-1489
Business Phone: (757) 898-7282
Fax: (757) 898-1282
Contact Person: Erik R. Turkovich
Site Foreman/Supervisor: M. Scott St. Clair
Specialty Subcontractors & Purpose (for BMP Construction Only):

Section 4 – Professional Certifications:

Certifying Professionals: *(Note: A Registered Professional Engineer of Certified Land Surveyor is responsible for preparation of a Record Drawing, sometimes referred to as an As-Built plan, for the drainage system for the project including any Stormwater Management/BMP Facilities. A Registered Professional Engineer is responsible for the inspection, monitoring and certification of Stormwater Management / BMP facilities during its construction.)*

Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

Record Drawing Certification

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Road, Suite 1
Williamsburg, VA 23188
Business Phone: (757) 253-0040
Fax: (757) 220-8994

Name: V. Marc Bennett
Title: Senior Project Manager
Signature: V. Marc Bennett
Date: 12/16/08

I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the Stormwater Management / BMP facility. The facility appears to conform with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

COMMONWEALTH OF VIRGINIA
VAN MARC BENNETT
Lic. No. 026628
12/16/08
PROFESSIONAL ENGINEER

V. Marc Bennett (Seal)

Virginia Registered Professional Engineer
Or Certified Land Surveyor

Construction Certification

Firm Name: ECS Mid-Atlantic, LLC
Mailing Address: 108 Ingram Rd, Ste. 1
Williamsburg, VA 23188
Business Phone: 229-6677
Fax: 229-9978

Name: Michael J. Galli
Title: principal
Signature: Michael J. Galli
Date: 12/15/08

I hereby certify to the best of my knowledge and belief that this Stormwater Management / BMP facility was monitored and constructed in accordance with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

COMMONWEALTH OF VIRGINIA
MICHAEL J. GALLI
Lic. No. 030684
12/15/08
PROFESSIONAL ENGINEER

Michael J. Galli (Seal)

Virginia Registered
Professional Engineer

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

I. Methods and Presentation: *(Required for all Stormwater Management / BMP facilities.)*

XX 1. All constructed facilities meet approved design plans, unless otherwise shown. Record information or deviations from approved design plan shown in clearly annotated format and/or boxed beside design values.

XX 2. Elevations to the nearest 0.1' unless higher accuracy is needed to show positive drainage.

XX 3. All plan sheets labeled with "RECORD DRAWING" in large text in lower right hand corner (Approved County Plan Number and BMP ID Code can be included if known).

XX 4. All plans sheet revision blocks modified to indicate date and record drawing status.

XX 5. All plan sheets have certification statements and certifying professional's signature and seal.

II. Minimum Standards: *(Required for all Stormwater Management / BMP facilities, as applicable.)*

XX 1. All requirements of Section I (Methods and Presentation) apply to this section.

XX 2. Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.

XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.

XX 4. Top widths, berm widths and embankment side slopes.

XX 5. Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Environmental Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations; and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or freeboard were closely maintained.

XX 6. Cross-section of the embankment through the principal spillway or outlet barrel. Must extend at least 100 ft. downstream of the pipe outlet or to recorded site property line, whichever is closer. Proper correlation is required between principal spillway (control structure) crest, emergency spillway crest, orifice and weirs and the top of the dam or facility. All elevations and dimensions must reasonably match the design plan or be sequentially relative to each other and the facility must reflect the required design storage volume(s) and/or design depth.

N/A 7. Profile or elevations along the entire centerline of the emergency spillway. Emergency spillway may be steeper, but no flatter or narrower than design.

XX 8. Elevation of the principal spillway crest or outlet crest of the structure.

XX	9.	Primary control structure (riser) diameter or dimensions, height, type of material and base size. Indicate provisions for access that are present such as steps, ladders, etc.
XX	10.	Dimensions, locations and elevations of outlet orifices, weirs, slots and drains.
XX	11.	Type and size of anti-vortex and trash rack device. Height, diameter, dimensions, bar spacings (if applicable) and elevations relative to the principal spillway crest. Indicate if lockable hatch is present or not.
XX	12.	Type, location, size and number of anti-seep collars or documentation of other methods utilized for seepage control. **May need to obtain this information during construction.**
XX	13.	Top of impervious core embankment, core trench limits and elevation of cut-off trench bottom. **May need to obtain this information during construction.**
XX	14.	Elevation of the principal spillway barrel (outlet pipe) inlet and outlet invert.
XX	15.	Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
XX	16.	Outfall protection dimension, type and depth of rock and if underlain filter fabric is present.
XX	17.	BMP interior and periphery landscaping zones conform with arrangements and requirements of the approved design plan.
XX	18.	Maintenance plan taken from approved design plan transposed onto record drawing set.
N/A	19.	Fencing location and type, if applicable to facility.
XX	20.	BMP vicinity properly cleaned of stockpiles and construction debris.
XX	21.	No visual signs of erosion or channel degradation immediately downstream of facility.
N/A	22.	Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

VIII. Group F – Extended Dry Detention *(Includes F-1 Timber Walls; and F-2 Dry Extended Detention with Forebay)*

XX	F1.	All requirements of Section II, Minimum Standards, apply to Group F facilities.
XX	F2.	Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.
N/A	F3.	Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)
N/A	F4.	Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.
XX	F5.	A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging
XX	F6.	Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
XX	F7.	Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.
XX	F8.	Low flow orifice, if used, has a minimum diameter of three (3) inches or two (2) inches if internal orifice control was utilized and a small, cage type external trash rack.
N/A	F9.	Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.
N/A	F10.	Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.
XX	F11.	Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.
XX	F12.	Stilling basin or standard outlet protection provided at principal spillway outlet.
XX	F13.	Adequate, direct access provided to the facility. Access corridor to facility is at least ten (10) feet wide, slope is less than twenty (20) percent and appropriate stabilization provided for equipment and vehicle use. Access extends to forebay, standpipe and timber wall, as applicable.
N/A	F14.	No visual signs of undercutting of timber walls or clogging of the low orifice were present.
XX	F15.	No visual signs of erosion or channel degradation immediately downstream of facility.
XX	F16.	No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.

BMP RECORD DRAWINGS

WINDSORMEADE
Of Williamsburg

LEGEND

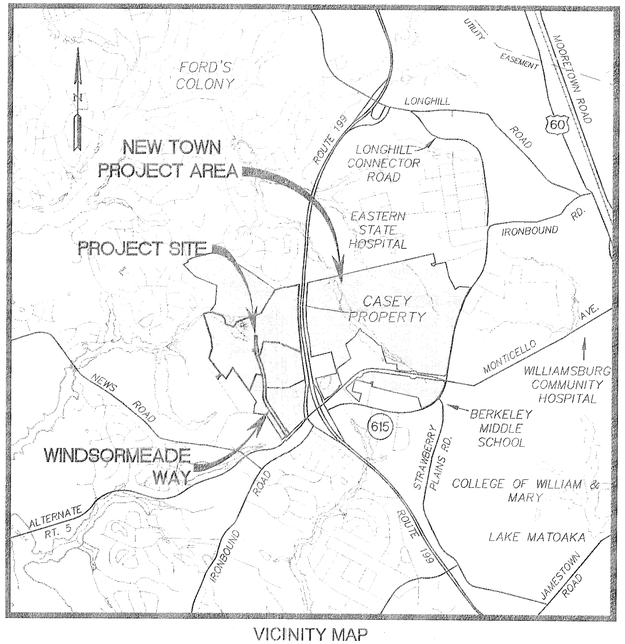
EXISTING		PROPOSED
W	WATER	W
S	GRAVITY SEWER	S
S	GRAVITY SEWER (BY OTHERS)	S
	STORM SEWER	
	FORCE MAIN	
	MANHOLE	
	CURB DROP INLET	
	YARD DROP INLET	
	VALVE	
	FIRE HYDRANT ASSEMBLY	

EXISTING		PROPOSED
	BLOW-OFF ASSEMBLY	cl
	CLEAN OUT	
	WATER METER	
	CENTERLINE/BASELINE	
	RIGHT OF WAY	
	PROPERTY LINE	
	℄ DITCH/SWALE	
	EXISTING TREELINE	
	GROUND ELEVATION	
	EXISTING CONTOUR ELEV.	

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING MISS UTILITY FOR EXISTING UTILITY LOCATIONS PRIOR TO COMMENCING CONSTRUCTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH THE DOMINION VIRGINIA POWER COMPANY, VERIZON TELEPHONE, APPROPRIATE CABLE COMPANY AND OTHERS THAT MAY BE REQUIRED.
3. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF WORK.
5. RESEARCH HAS SHOWN NO EVIDENCE OF ENVIRONMENTAL OR HEALTH HAZARDS ON THIS SITE.
6. ALL UTILITIES WILL BE PLACED UNDERGROUND.
7. A PRECONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE BETWEEN THE COUNTY, THE PROJECT ENGINEERS AND THE CONTRACTOR PRIOR TO ISSUANCE OF A LAND DISTURBING PERMIT.
8. ALL SANITARY SEWER AND WATER FACILITIES MUST HAVE A 5 FOOT MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN IT AND ALL OTHER FIXED STRUCTURES, SUCH AS: DROP INLETS, FIRE HYDRANTS, LIGHT POLES, AND STORM SEWER PIPES, ETC.
9. ANY EXISTING UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE. PERMITS CAN BE ACQUIRED FROM THE VIRGINIA DEPARTMENT OF HEALTH, WILLIAMSBURG OFFICE. TELEPHONE NUMBER: 757-253-4813
10. THE TOPOGRAPHIC DATA REPRESENTED ON THIS DRAWING IS SUPPLIED BY OWNER/DEVELOPER. CONTOUR INTERVAL = 2 FEET.
11. ALL SECURITY LIGHTING IS TO BE LOCATED A MINIMUM OF 10' OFF THE EDGE OF PAVEMENT AND SHALL NOTE BE POSITIONED IN DITCH LINES.
12. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE NOTED.
13. ALL EXISTING STRUCTURES LOCATED ON THE SITE ARE TO BE DEMOLISHED AND WILL REQUIRE A DEMOLITION PERMIT. THIS PERMIT CAN BE ACQUIRED FROM THE JAMES CITY COUNTY CODE COMPLIANCE DEPARTMENT, TELEPHONE NUMBER: 757-253-6626
14. ALL FIRE HYDRANTS INSTALLED SHALL FACE WINDSORMEADE WAY UNLESS OTHERWISE NOTED.
15. NO TREES, SHRUBS, FENCES OR OBSTACLES SHALL BE PLACED WITHIN A JCSA EASEMENT WHICH WOULD RENDER THE EASEMENT INACCESSIBLE BY EQUIPMENT. SHRUBS SHALL BE A MINIMUM OF 5 FEET, AND TREES A MINIMUM OF 10 FEET, FROM THE CENTER OF WATER AND SEWER PIPELINES.
16. ALL ROADS SHALL BE PLACED WITHIN PRIVATE RIGHT-OF-WAYS.
17. JCSA SHALL BE GRANTED ACCESS EASEMENTS TO WATER AND SEWER LOCATED WITHIN PRIVATE RIGHT-OF-WAYS.
18. ALL ROADS SHALL BE PLACED WITHIN PRIVATE RIGHT-OF-WAYS AND SHALL NOT BE MAINTAINED BY JAMES CITY COUNTY OR VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT). THE PRIVATE RIGHT-OF-WAYS WILL REMAIN PRIVATELY OWNED AND ARE TO PROVIDE ACCESS FOR MAINTANCE OF UTILITIES AND INGRESS/EGRESS WITHIN THE PROPERTY.
19. ONLY JCSA PERSONNEL ARE AUTHORIZED TO OPERATE VALVES ON EXISTING MAIN.
20. STORM STRUCTURES SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS. ALL MANHOLES AND RISER STRUCTURES SHALL INCLUDE INLET SHAPING (IS-1) AND MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). PIPE BEDDING SHALL BE IN ACCORDANCE WITH VDOT PB-1 AND MANUFACTURERS SPECIFICATIONS/GUIDELINES.

JAMES CITY COUNTY, VIRGINIA



VICINITY MAP
SCALE: 1"=2000'

JANUARY, 2004
PROJECT NO.: 8818-4

JCC CASE #SP-05-04

"THE STORM DRAINAGE & BMP AS-BUILT LOCATIONS AND GRADES SHOWN ON THESE DRAWINGS, ARE ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND I CERTIFY THAT I, OR MY AGENT, HAVE MADE SUFFICIENT INSPECTION TO ENSURE THE ACCURACY OF THIS STATEMENT."

THOMAS C. SUBLETT 9/11/08
THOMAS C. SUBLETT DATE

COMMONWEALTH OF VIRGINIA
THOMAS C. SUBLETT
LIC. NO. 18801
09/11/2008
LAND SURVEYOR

CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-8994

INDEX OF SHEETS

OWNER/DEVELOPER INFORMATION:

VIRGINIA UNITED METHODISTS HOME, INC.
453 McCLAMS CIRCLE, SUITE 2
WILLIAMSBURG, VIRGINIA. 23185
TELEPHONE: (757) 293-2800
CONTACT: JIM FRANKLIN

CERTIFIED RESPONSIBLE LAND DISTURBER:

V. MARC BENNETT, P.E.
AES CONSULTING ENGINEERS
5248 OLDE TOWNE ROAD, SUITE 1
WILLIAMSBURG, VIRGINIA. 23188
TELEPHONE: 757-253-0040

SITE DATA: (WINDSORMEADE OVERALL)

TAX MAP PARCEL No.	(38-3)(1-34 A)
ZONING:	MU (MIXED USE) WITH PROFFERS (JCC CASE NO. Z-2-01/MP-2-01)
TOTAL PROJECT AREA:	4,614,364 S.F.± 105.93 AC.±
WATERSHED:	POWHATAN CREEK (SUBWATERSHED 209, CATCHMENTS 209-101-1)

SITE DATA: (ENTRANCE + SEWER)

AREA OF PRIVATE R/W:	47,400 S.F.±	1.09 AC.±
DISTURBED AREA:	122,785 S.F.±	2.82 AC.±
IMPERVIOUS AREA:	19,020 S.F.±	0.44 AC.±
PERMITTED WETLAND DISTURBED AREA:	11,326 S.F.±	0.26 AC.±

FLOOD HAZARD MAP: FEMA PANEL NUMBER 5102010035 B, DATED 2/6/91
NOTE: SITE IS LOCATED IN ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN)

GUARDHOUSE BUILDING AREA: 288 S.F. (BUILDING USE B, BUSINESS CONSTRUCTION TYPE 5B)

APPROVED
James City County
Environmental Division
By: Scott Thomas
Date: 02/15/10

SP-005-04

BMP RECORD DRAWINGS.: 9-11-2008

NOTE:
A RPZ BACKFLOW PREVENTER MUST BE PROVIDED WITHIN THE WINDSOR HALL FACILITY BEING SERVICED BY THE WATER LINE.

No.	DATE	REVISION / COMMENT / NOTE	BY
2	5/12/04	REVISED PER JCC COMMENTS 04/04	WMB
1	3/29/04	REVISED PER JCC COMMENTS DATED 3/29/04	WMB

EROSION AND SEDIMENTATION CONTROL LEGEND

- (CE) CONSTRUCTION ENTRANCE (SPEC. 3.02)
- (SSF) SUPER SILT FENCE (WITH WIRE) (SPEC. 3.05)
- (SF) SUPER SILT FENCE (WITH OUT WIRE) (SPEC. 3.05)
- (DD) TEMPORARY DIVERSION DIKE (SPEC. 3.09)
- (DV) DIVERSION (SPEC. 3.12)
- (ST) TEMPORARY SEDIMENT TRAP (SPEC. 3.13)
- (IP) STORM DRAIN INLET PROTECTION(SPEC. 3.07)
- (OP) OUTLET PROTECTION (SPEC. 3.18)
- (CD) CHECK DAM (SPEC. 3.20)
- (TP) TREE PROTECTION (SPEC. 3.38)

NOTE:
SEE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK FOR EROSION CONTROL SPECIFICATIONS (SPEC.) AND DETAILS.

No.	DATE	REVISION / COMMENT / NOTE	BY
3	10/12/04	REVISED PER JCC COMMENTS DATED 9/7/04	MAB
2	12/29/04	REVISED PER JCC COMMENTS DATED 12/10/04	MAB
1	1/5/05		

5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
(757) 253-0040
Fax (757) 220-9994

CONSULTING ENGINEERS

+64, 47' RT. (WINDSOR HALL)
SS# 2-1
VDOT ES-1
INV=~~55.00~~ 55.55

PROVIDE TEMPORARY SWALE UNTIL SUCH TIME AS THE ROAD IS EXTENDED. (MAINTAIN A MIN. 1% SLOPE ON SWALE)

6" HDPE DRAINS FROM VAULT TO STILLING BASIN
INV IN=54.0
INV OUT=53.0
(PROVIDE MESH VARMINT SCREENS AT PIPE ENDS)

10'x10' STILLING BASIN (SEE DETAIL SHEET 8)

PROVIDE 10' ~~40'~~ WIDE TOP OF BERM =58.9±

SWM/BMP EXTENDED DETENTION DRY POND, COUNTY TYPE F2, 4 POINT BMP. (SEE DETAIL SHEET 8)

VILLA ENTRANCE BMP
1-YR ELEV.=55.38
2-YR ELEV.=56.02
10-YR ELEV.=56.77
100-YR ELEV.=57.76

LIMITS OF WETLANDS

+64, 12' RT. (WINDSOR HALL)
SS# 2-2
VDOT STD. DI-2A
RIM=~~61.67~~ 61.88
INV=~~57.72~~ 57.98

VDOT ES-1
INV.=~~53.0~~ 53.5

30 LF OF 12" RCP @ 1.37% SLOPE

2.08 AC. DRAINAGE AREA TO BMP/SEDIMENT BASIN

10'x10' RIP-RAP OUTLET PROTECTION EMBEDDED 18" OVER FILTER FABRIC

CONCRETE EMERGENCY SPILLWAY TOP=58.2

CONCRETE EMERGENCY SPILLWAY (SEE DETAIL SHEET 8)

20 LF OF 15" RCP @ 2.45% SLOPE

+64, 12' LT. (WINDSOR HALL)
SS# 2-3
VDOT STD. DI-2B, L=6'
61.83 RIM=~~61.67~~
58.47 INV=~~57.92~~

12" RCP INV=53.91

GRATE INV. IN=56.1

5'x5' CONCRETE MICRO-POOL PROJECT EMBEDDED 10" BOTTOM= 52.25 OVER FILTER FABRIC

3" PVC INV=54.11

15 LF OF 3" PVC @ 2.8% SLOPE

RIP RAP

3" PVC INV=53.72

24 LF OF 15" RCP @ ~~7.84%~~ SLOPE @ 3.13%

5 LF OF 15" RCP @ ~~7.84%~~ SLOPE

15" RCP INV=55.55

+79, 38' LT.
SS# 1-1
VDOT ES-1
INV=~~55.00~~ 55.28

18" RCP

RIP RAP

+76, 21' LT.
SS# 1-2
VDOT STD. DI-2C
RIM=~~61.68~~ 61.68
INV=~~56.03~~ 56.03

20 LF OF 15" RCP @ 2.10% SLOPE

+12, 12' LT.
SS# 1-6
VDOT STD. DI-2A
RIM=62.75
INV=57.30

130 LF OF 15" RCP @ 1.33% SLOPE

MODULAR RETAINING WALL
20'L x 15'W TO 25'W RIP-RAP OUTLET PROTECTION EMBEDDED 24", d50=1'

WATER VALVE
GAS VALVE
GUARDRAIL

CN=0.80 0.03 AC.
CN=0.80 0.13 AC.
CN=0.80 0.21 AC.
CN=0.80 0.15 AC.
CN=0.80 0.22 AC.
CN=0.67 0.28 AC.
CN=0.63 0.33 AC.
CN=0.60 0.51 AC.

TW= 64.5±
TW= 66.6±
TW= 66.5±

3:1 MAX.

WINDSORMEADE WAY
VARIABLE WIDTH R/W

FF=64.5

124 LF OF 15" RCP @ 1.75% SLOPE

93 LF OF 15" RCP @ 1.00% SLOPE

+56, 43' RT.
SS#1-5
VDOT STD. DI-2B, L=6'
RIM=63.10
INV=59.35

+52, 27' RT.
SS# 1-4
VDOT STD. DI-2B, L=6'
RIM=62.20
INV=58.42

+76, 12' RT.
SS# 1-3
VDOT STD. DI-2C, L=6'
RIM=61.48
INV=56.25

20 LF OF 15" RCP @ 1.00% SLOPE

+12, 12' RT.
SS# 1-7
VDOT STD. DI-2A
RIM=62.75
INV=57.50

VILLA ENTRANCE CROSSING
1-YR ELEV.=47.07
2-YR ELEV.=47.44
10-YR ELEV.=48.40
100-YR ELEV.=49.24

50 LF OF 60" RCP @ 2.60% SLOPE
INV. IN= 46.0
INV. OUT= 44.7
(INSTALL PIPE A MINIMUM OF 6" BELOW EXISTING GRADE)

LIMITS OF WETLANDS

APPROVED
James City County
Environmental Division
By:
Date: 02-05-05

GRAPHIC SCALE
25' 0' 25' 50'
SCALE: 1" = 25'

BMP RECORD DRAWINGS.: 9-11-2008

GRADING, DRAINAGE AND EROSION & SEDIMENT CONTROL PLAN

WINDSORMEADE of Williamsburg

VILLA ENTRANCE & SEWER CONSTRUCTION PLAN

JAMES CITY COUNTY VIRGINIA

BERKELEY DISTRICT

Designed VMB/JAG	Drawn SRL
Scale 1"=25'	Date 1/9/04
Project No. 8818-05	
Drawing No. 7	

GENERAL NOTES FOR CONSTRUCTION OF STORMWATER BASINS

1. THE CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS NEEDED TO CONSTRUCT THE STORMWATER BASIN, STORMWATER MANAGEMENT PONDS, BEST MANAGEMENT PRACTICES, SEDIMENT BASINS AND SEDIMENT TRAPS. THE WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND MATERIALS NEEDED FOR THE COMPLETION OF GRADING AND EARTHWORK ASSOCIATED WITH THE CONSTRUCTION.

2. THE CONTRACTOR SHALL CONSULT AND PROVIDE FOR THE SERVICES OF A GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE TEST RESULTS ON IN-SITU DAM MATERIALS, IDENTIFYING SOIL CLASSIFICATION, PERMEABILITY, PLASTICITY INDEX, AND COMPACTION. ALL TESTS SHALL BE IN CONFORMANCE WITH ASTM STANDARDS. THE COST OF THE SERVICES OF THE GEOTECHNICAL ENGINEER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SATISFACTORY GEOTECHNICAL RESULTS ARE NEEDED PRIOR TO FINAL APPROVAL.

3. ALL INSPECTIONS REQUIRED FOR THE WORK SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER AT THE EXPENSE OF THE GENERAL CONTRACTOR.

4. ON-SITE EXCAVATED MATERIAL, IF DETERMINED SUITABLE FOR USE IN DAM CONSTRUCTION BY A GEOTECHNICAL ENGINEER, MAY BE USED FOR DAM CONSTRUCTION. SHOULD ADDITIONAL MATERIAL BE REQUIRED, THE CONTRACTOR SHALL IDENTIFY THE NEED FOR MATERIAL TO THE OWNER, AS ADDITIONAL BORROW MATERIAL MAY BE AVAILABLE ON THE PROPERTY. ALL EXCAVATED MATERIAL DETERMINED BY THE GEOTECHNICAL ENGINEER TO BE UNSUITABLE SHALL BE DISPOSED OF PROPERLY AT THE CONTRACTOR'S EXPENSE. ALL EXCAVATED MATERIAL NOT REQUIRED FOR BACKFILLING SHALL EITHER BE DEPOSITED ON SITE AND SPREAD BY THE CONTRACTOR, OR SHALL BE DEPOSITED IN AN AREA ON THE PROPERTY AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROVIDE PROPER STABILIZATION AND EROSION AND SEDIMENT CONTROL MEASURES NEEDED TO CONTROL AS PER THE VESCH THIRD EDITION.

5. UNDERCUT FOR THE FOUNDATION OF THE DAM EMBANKMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATION. THE FOUNDATION SHALL BE BACKFILLED WITH SOILS CLASSIFIED AS SM, SC, OR CL UNDER THE UNIFIED SOIL CLASSIFICATION SYSTEM. UNLESS OTHER RECOMMENDATIONS ARE PROVIDED BY THE GEO-TECHNICAL ENGINEER, SOILS SHALL HAVE A MINIMUM OF 15% BY WEIGHT FINES, HAVING A PLASTICITY INDEX OF 30% AND A PERMEABILITY OF 0.0004 IN./SEC. OR LESS. FILL SHALL BE COMPACTED IN 12-INCH LIFTS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER, TO A DRY DENSITY OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). EXCAVATION FOR THE DAM KEY SHALL BE IN ACCORDANCE TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION. HEIGHT, DEPTH, AND WIDTH OF THE KEY SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. THE KEY SHALL BE FORMED USING SOILS CLASSIFIED AS SC OR CL, WITH A PERMEABILITY OF 0.0004 IN./SEC. OR LESS UNLESS OTHER RECOMMENDATIONS ARE PROVIDED BY THE GEOTECHNICAL ENGINEER.

6. THE DAM CORE, IF REQUIRED, SHALL BE AS CONSTRUCTED WITH NON-EXPANSIVE SC OR CL CLAYEY MATERIAL WITH PERMEABILITY OF 0.0004 IN./SEC. OR LESS. THE FILL OF THE CORE SHALL BE MADE IN 12-INCH LIFTS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER, TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). SIZE, SHAPE, WIDTH, DEPTH, AND HEIGHT OF THE DAM CORE SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. TO COVER THE DAM CORE, A SILTY FINE SAND OR CLAYEY SOIL (SM, SC, OR CL) SHALL BE PLACED. A VEGETATIVE COVER USING VDOT EC-2 EROSION CONTROL BLANKETS SHALL BE PLACED ON DAM SLOPES AND CREST TO PREVENT EROSION.

7. THE STORMWATER MANAGEMENT / BMP FACILITIES SHOWN ON THESE PLANS REQUIRE THE SUBMISSION, REVIEW AND APPROVAL OF RECORD DRAWING(S) AND CONSTRUCTION CERTIFICATION PRIOR TO RELEASE OF THE POSTED BOND / SURETY. THE GEOTECHNICAL ENGINEER IS TO ENSURE THAT HIS / HER INSPECTION OF THE SWM / BMP CONSTRUCTION ACTIVITY IS PERFORMED DURING AND FOLLOWING CONSTRUCTION OF THE SWM / BMP IN ACCORDANCE WITH THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION STORMWATER MANAGEMENT / BMP FACILITIES DESIGN GUIDELINES HANDBOOK, DATED AUGUST 30, 2000.

8. THE CONTRACTOR SHALL PROVIDE INTERIM CERTIFICATION OF THE TEMPORARY SEDIMENT BASINS IN ACCORDANCE WITH SECTION 5 OF THE JAMES CITY COUNTY BMP, EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT DESIGN GUIDES.

POND FACILITY MAINTENANCE PLAN

PROPER MAINTENANCE OF THIS FACILITY IS ENCOURAGED TO PREVENT THE INTRODUCTION OF DEBRIS AND SEDIMENT IN TO THE FACILITY, SPILLWAY(S) AND DOWNSTREAM WATERWAYS. FOLLOWING INSTALLATION OF THE FACILITY AND ESTABLISHMENT OF VEGETATION IN DISTURBED AREAS, INSPECTIONS FOR SEDIMENT BUILDUPS WILL BE PERFORMED AT LEAST QUARTERLY. IT IS ANTICIPATED THAT UNDER NORMAL CONDITIONS, SEDIMENT REMOVAL FROM THE FACILITY WILL BE REQUIRED ONCE EVERY 10 YEARS. IF OTHER CONSTRUCTION OR RELATED ACTIVITIES ARE PERFORMED ON UPSLOPE PARCELS, ADEQUATE PROTECTION SHOULD BE PROVIDED AND INSPECTIONS PERFORMED AT LEAST ONCE WEEKLY OF THESE NEWLY DISTRIBUTED AREAS AS WELL AS INSPECTIONS FOR ACCUMULATED SEDIMENTS AT THE TWO DETENTION PONDS.

A DESIGNATED REPRESENTATIVE OF THE OWNER WILL INSPECT THE DETENTION POND STRUCTURE AFTER EACH SIGNIFICANT RAINFALL EVENT OR THE FOLLOWING WORKING DAY IF A WEEKEND OR HOLIDAY OCCURS. A SIGNIFICANT RAINFALL FOR THIS STRUCTURE IS DEFINED AS ONE INCH OR MORE OF GAUGED RAINFALL WITHIN A 24 HOUR PERIOD. ONCE PER YEAR, A REPRESENTATIVE OF THE COUNTY MAY JOINTLY INSPECT THE STRUCTURE. APPROPRIATE ACTION, PERFORMED AT THE COST OF THE OWNER, WILL BE TAKEN TO ENSURE APPROPRIATE MAINTENANCE. KEYS TO LOCKED ACCESS POINTS SHALL BE MADE AVAILABLE TO COUNTY INSPECTION PERSONNEL UPON REQUEST.

INSPECTION AND MAINTENANCE OF THE FACILITY WILL CONSIST OF THE FOLLOWING ADDITIONAL MEASURES:

1. THE INSPECTION FOR SEDIMENT BUILDUP WILL BE PERFORMED BY VISUAL INSPECTION AND A PHYSICAL DETERMINATION OF SEDIMENT DEPTH WITHIN THE STORAGE AREA. SEDIMENT REMOVAL IS REQUIRED USING A RUBBER-WHEELED BACKHOE. AT THE SAME TIME, OR AT LEAST ONCE PER YEAR, THE RISER BOTTOM AND OUTLET PIPE SHALL BE CLEANED OF ACCUMULATED SEDIMENTS. DISPOSE OF SEDIMENTS REMOVED FROM THE FACILITY AT AN ACCEPTABLE DISPOSAL AREA. SEDIMENT SHALL NOT BE ALLOWED TO ACCUMULATE IN DEPTHS GREATER THAN 1-FOOT. NO SEDIMENT SHALL BE ALLOWED TO ACCUMULATE TO A HEIGHT THAT PROHIBITS FLOW IN ANY PIPE OR CULVERT.

2. PERFORM MAINTENANCE, MOWING OF GRASSED AREAS AT LEAST TWICE EACH YEAR. GRASSES SUCH AS TALL FESCUE SHOULD BE MOWED IN EARLY SUMMER AFTER EMERGENCE OF THE HEADS ON COOL SEASON GRASSES AND IN LATE FALL TO PREVENT SEEDS OF ANNUAL WEEDS FROM MATURING. MOWING OF LEGUMES CAN BE LESS FREQUENT THESE AND SHRUBS SHOULD NOT BE PERMITTED TO GROW ON ANY PART OF THE GRADED EMBANKMENT.

3. PERFORM SOIL SAMPLING ON STABILIZED DETENTION POND SOIL AREAS ONCE EVERY FOUR (4) YEARS. SOIL SAMPLING AND TESTING SHOULD BE PERFORMED BY A QUALIFIED INDEPENDENT TESTING LABORATORY. APPLY ADDITIONAL LIME AND FERTILIZER IN ACCORDANCE WITH TEST RECOMMENDATIONS.

4. IN STABILIZED DETENTION POND AREAS, IF VEGETATION COVERS LESS THAN 40% OF SOIL SURFACES, LIME, FERTILIZE AND SEED IN ACCORDANCE WITH RECOMMENDATIONS FOR NEW SEEDLINGS, AS LISTED IN DAM CONSTRUCTION NOTES. IF VEGETATION COVERS MORE THAN 40% BUT LESS THAN 70% OF SOIL SURFACES, LIME, FERTILIZE AND OVERSEED IN ACCORDANCE WITH CURRENT SEEDING RECOMMENDATIONS.

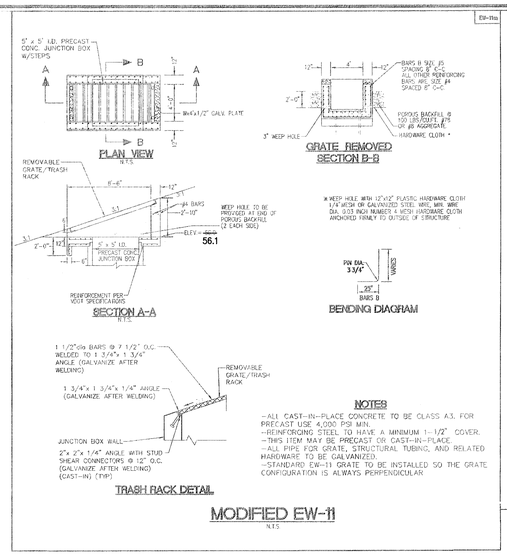
5. PERFORM QUARTERLY INSPECTIONS OF THE RELEASE STRUCTURES, RISER SECTION AND CREST OF SPILLWAY FOR THE OBSERVANCE OF COLLECTED DEBRIS. IMMEDIATELY REMOVE ANY DEBRIS TO MAINTAIN THE INTEGRITY OF THE STRUCTURE AND PROVIDE AN ATTRACTIVE APPEARANCE.

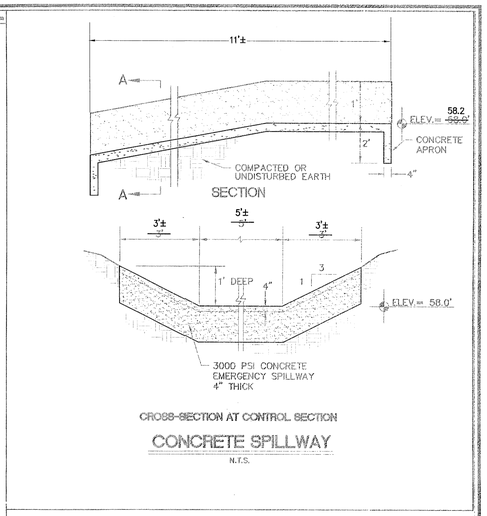
6. PERFORM YEARLY STRUCTURAL INSPECTIONS OF THE FACILITY FOR DAMAGE. STRUCTURAL INSPECTION SHALL BE PERFORMED ON THE CONCRETE RISER, ANTI-VORTEX DEVICE, TRASH RACK, ORIFICE, WEIRS(S), OUTLET BARREL, AND POND EMBANKMENT. IF DAMAGE IS EVIDENT, FURTHER INVESTIGATION BY A PROFESSIONAL ENGINEER MAY BE REQUIRED TO ASSESS THE CONTINUED INTEGRITY OF THE STRUCTURE.

7. PERFORM QUARTERLY INSPECTIONS OF THE GRADED SIDE SLOPES OF THE FACILITY FOR SIGNS OF ANIMAL/ RODENT BURROWS OR SLOPE EROSION. IMMEDIATELY PERFORM NECESSARY REPAIRS, REFILLING OR RESEEDING AS APPROPRIATE.

8. RECORD KEEPING. THE LANDOWNER OR DESIGNATED REPRESENTATIVE SHALL KEEP REASONABLE, ACCURATE WRITTEN RECORDS OR INSPECTIONS PERFORMED FOR THE STRUCTURE. RECORDS SHALL DOCUMENT ROUTINE MAINTENANCE AND/ OR REPAIRS PERFORMED. COPIES SHALL BE PROVIDED TO THE COUNTY UPON REQUEST.

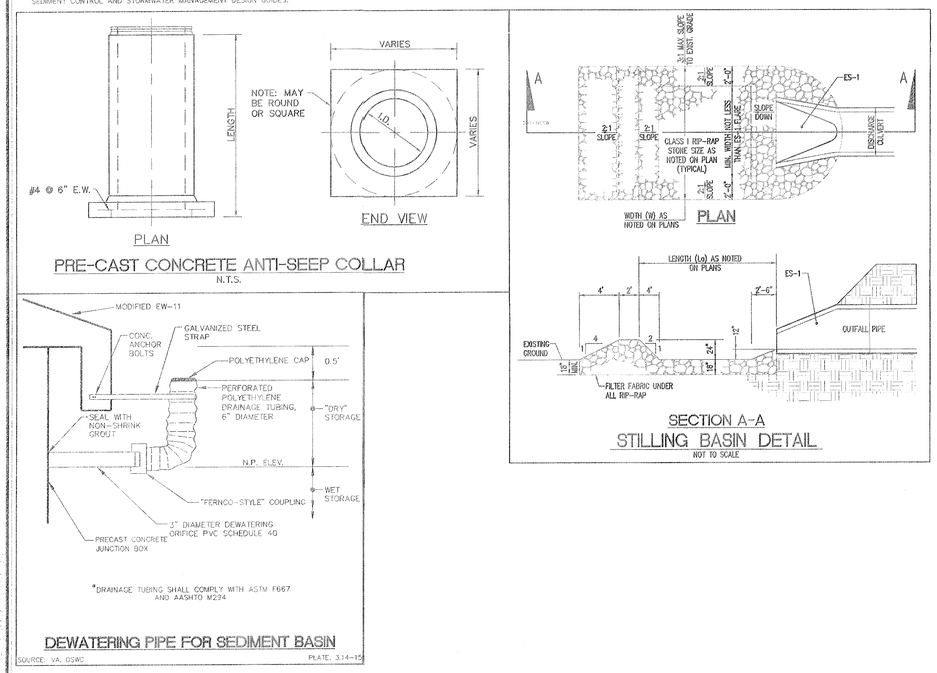
9. THE FACILITY SHALL NOT BE MODIFIED IN ANY WAY WITHOUT PRIOR CONSENT/ APPROVAL OF THE COUNTY.

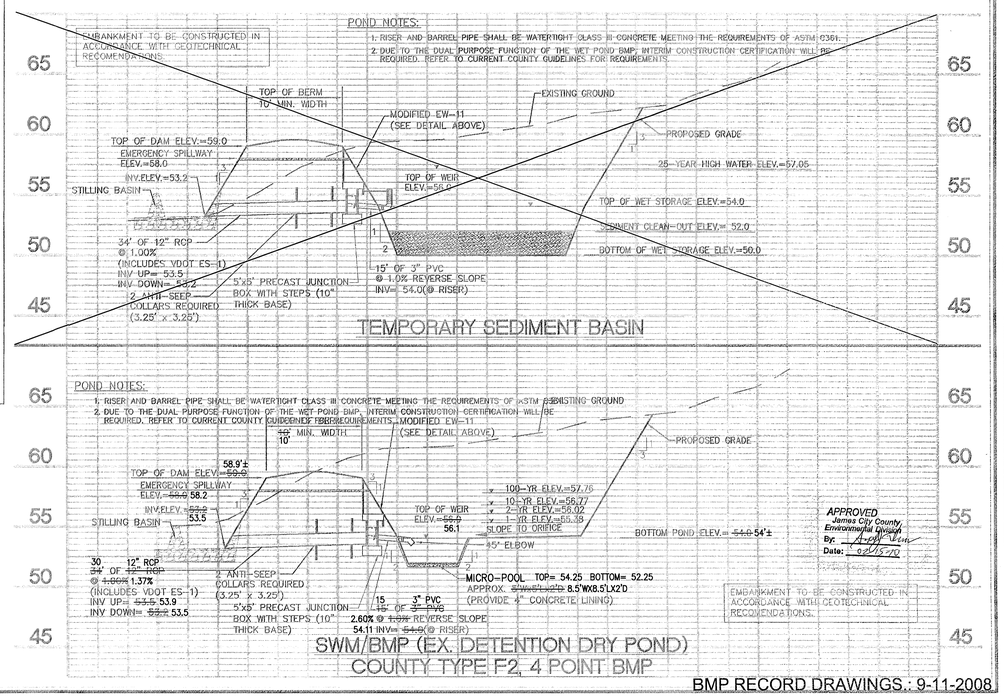




CONVERSION OF SEDIMENT BASINS INTO BMP FACILITIES

BMP FACILITY WILL INITIALLY BE CONSTRUCTED AS A SEDIMENT BASIN REQUIRING EXCAVATION TO PROVIDE ADEQUATE STORAGE. ONCE J.C.C. ENVIRONMENTAL DIVISION GIVES CONCURRENCE TO REMOVE THE SEDIMENT BASIN, ANY EXCESS EARTH OR SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. REMOVE ANY TEMPORARY BARRIERS, REGRADE AND SEED, AND REMOVE DEWATERING PIPE.





BMP RECORD DRAWINGS: 9-11-2008

No.	DATE	REVISION / COMMENT / NOTE	BY
1	3/25/04	REVISED PER JCC COMMENTS DATED 2/20/04	MJB
2	3/17/04	REVISED PER JCC COMMENTS DATED 4/04	MJB

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Williamsburg, Virginia 23188
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CONSULTING ENGINEERS

STORMWATER MANAGEMENT DETAILS
WINDSORMEADE
VILLA ENTRANCE & SEWER CONSTRUCTION PLAN
JAMES CITY COUNTY VIRGINIA
BERKELEY DISTRICT

Designed	Drawn
JAC	JAC
Scale	Date
N/A	1/9/04
Project No.	
8818-05	
Drawing No.	
8	